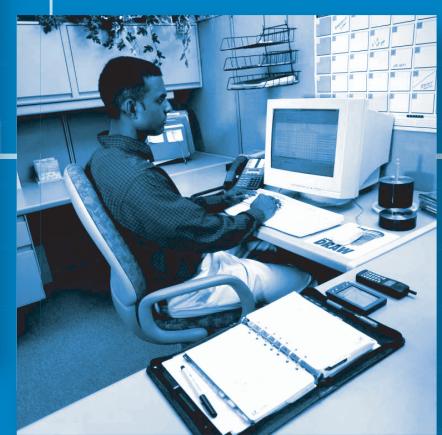


# Workforce Development Blueprint

## DEFINING VIRGINIA WORKFORCE NEEDS

### 2012

Population



Industry



Education



Employers



Job Growth

Virginia Workforce Council





## Workforce Development Blueprint DEFINING VIRGINIA WORKFORCE NEEDS 2012

DRAFT

December 6, 2005

Please direct comments or questions to Ann Lang at  
[Ann.Lang@vec.virginia.gov](mailto:Ann.Lang@vec.virginia.gov)  
or call 804-786-3177

Employers

Job Growth

## **Contributors:**

### **Virginia Workforce Council members**

Daniel G. LeBlanc, State Blueprint Task Force Lead  
Marjorie M. Connelly, Chair, Virginia Workforce Council  
Dolores Esser, Governor's Special Advisor for Workforce Development and Commissioner, Virginia Employment Commission  
The Honorable Michael J. Schewel, Secretary of Commerce and Trade  
James H. Underwood, IBEW-Local Union No. 666  
Andrea Wooten, Great Falls

Population



### **State Blueprint Resource Staff**

Don Lillywhite, Resource Staff Lead, Virginia Employment Commission  
Ann Battle, Virginia Economic Development Partnership  
Willie Blanton, Virginia Employment Commission  
Kathy Dolan-Marshall, Virginia Employment Commission  
Ann Lang, Virginia Employment Commission  
Carolyn Leslie, Virginia Employment Commission  
Leonard Sledge, Virginia Community College System  
Mark Spatig, Virginia Employment Commission

## **Other**

A. Fletcher Mangum, Mangum Economic Consulting, LLC  
Bev Donati, Virginia Department of Labor and Industry  
From the Virginia Employment Commission: Laura Adkins, Aaron Barber, Joyce Fogg, Tim Kestner, Joan McDorman, Gail Robinson, Larry ~~Employers~~  
Robinson, and Linda Simmons.

Education



Job Growth

## *Table of Contents*

Executive Summary and Conclusions .....	iv-v
Introduction .....	vi
The Virginia Economy .....	1
State Workforce Needs .....	8
State Workforce Supply .....	15
Regional Workforce Needs .....	21-86
Appendix A .....	87-89

---

## *Executive Summary and Conclusions*

**Executive Summary—The Workforce Development Blueprint—Defining Virginia Workforce Needs 2012** is an essential first step in the process of determining Virginia’s workforce needs and subsequent workforce development strategies. As envisioned by the Virginia Workforce Council, the *Workforce Development Blueprint* will analyze job creation projections, skill needs, and potential gaps in light of projected economic development trends and identify industry and occupational targets for workforce development, all towards the goal of defining Virginia workforce needs.

Virginia has a diverse and growing economy and must have a workforce to support and sustain this growth. Analyzing economic and demographic trends provides important information about Virginia’s future workforce. Like the nation, Virginia’s population growth is expected to slow in the future but will continue to exceed the national growth rate. Slower population growth means fewer new and replacement workers. Also, Virginia’s population and workforce are aging. An older population signals loss of experience and skills through retirement. As a result of the improvement in educational attainment during the 1990s, Virginia’s population and workforce are better educated and have the knowledge, skills, and abilities to attract well-paying jobs. Virginia’s continued low unemployment rate in some areas of the state results in tight labor markets and wage pressure in high-demand occupations.

An analysis of occupational projections and resulting occupational gaps shows state workforce needs. Virginia’s fastest-growing occupations are Management, Professional and Related Occupations, and Service Occupations. The three occupation groups with the largest number of openings are Office and Administrative Support, Sales, and Food Preparation. A comparison of the likely workforce-driven demand for graduates from specific postsecondary education and training programs with the likely supply of graduates shows that the largest occupational gaps tend to be in accounting, computer, education, and healthcare related occupations.

In Virginia, potential labor supply opportunities for workforce development include unemployed workers, apprenticeship, retirees, exiting military, international and internal migration, and prison re-entry. Unemployed individuals are available for immediate hire and are an important source of labor supply. The registered apprenticeship system trains employees in over 300 occupations and helps businesses develop and maintain a skilled, dedicated workforce.

---

Over two-thirds of Virginia's registered apprentices are in Construction and Public Administration, and electrician was the top occupation in number of active apprenticeships. Retirees are re-entering the workforce, and those approaching retirement are expected to work beyond their normal retirement years. These workers are experienced, knowledgeable, and a valuable workforce asset. With the significant military presence in Virginia, exiting military are well educated and provide a skilled potential labor source. People moving into Virginia from other countries and states are an important component of Virginia's labor market—with migration, employment growth is not constrained by current population and labor supply. Inmates released from state institutions and local jails present another workforce opportunity. Approximately 10,000 inmates are released from state institutions each year, and of those, 46 percent participated in either academic or vocational training.

**Conclusions**—In conclusion, this report provides a cornerstone in defining Virginia's workforce needs. Educators, workforce professionals, job seekers, workers, and employers can use this information to prepare for the future. It is vital that these partners work together to build a future workforce that will ensure economic growth and prosperity.

By highlighting demand-driven occupations and potential occupational gaps, workforce needs can be evaluated; and workforce development strategies to meet these needs can be developed and implemented. The workforce can be expanded by engaging and utilizing diverse labor supply sources such as unemployed workers, apprenticeship, retirees, exiting military, international and internal migration, and prison re-entry.

Agency coordination at the regional level for development of workforce strategies based on demand-driven occupations and regional economic opportunities stemming from the existing and emerging industry and workforce base is recommended. A similar workforce needs analysis at the regional level may complement the regional cluster analysis in the report.

---

## *Introduction*

The Virginia Workforce Council (VWC) charged Task Force II under the leadership of Dan LeBlanc with the creation of a *Workforce Development Blueprint* for the State, an objective aligned with the Integration and Alignment strategic goal. As envisioned by the VWC, the *Workforce Development Blueprint* will gather and analyze job creation projections, skill needs, and potential gaps in light of projected economic development trends and identify industry and occupational targets for workforce development, all towards the goal of defining Virginia workforce needs.

Developing a “blueprint” requires an understanding of the demand-side and the supply-side forces that drive the labor market. On the demand side, industries require a stream of employees in specific occupations to meet current and future labor needs. A view of broad economic trends in the economy helps to frame the demand picture, while projections of occupational employment bring industry demand down to the level of specific occupations. In addition, to the extent that regions develop marketing plans to target specific industries or clusters of industries, the workforce implications of these plans must also be considered. On the supply side, current estimates of occupational employment and availability of unemployed workers comprise the existing labor pool. Population growth and, more specifically, graduates of community colleges, four-year colleges and universities, and State approved apprenticeship programs determine the supply of available labor for the future. Other labor supply considerations include retirees that are re-entering or remaining in the labor force, exiting military, international and internal migration, and inmates released from state institutions and local jails.

The *Workforce Development Blueprint—Defining Virginia Workforce Needs 2012* begins with an analysis of the demographic and economic characteristics of the Virginia economy. An evaluation of state workforce needs follows. This evaluation is based on an analysis of the occupational projections and resulting potential occupational gaps. Data on the characteristics of the unemployed, apprenticeship programs and completion rates, and other factors such as retirees continuing to work, exiting military, international and internal migration, and inmates released from state institutions and local jails will round out the state workforce supply picture. Regional workforce needs also will be analyzed by looking at the top occupations for existing and emerging industry clusters and the “best fit” industries for displaced workers.

This report identifies the state’s and each region’s economic opportunities, based on the existing industry and workforce base. By highlighting potential occupational gaps, Virginia’s workforce needs can be evaluated and workforce development strategies can be developed and implemented.

## The Virginia Economy

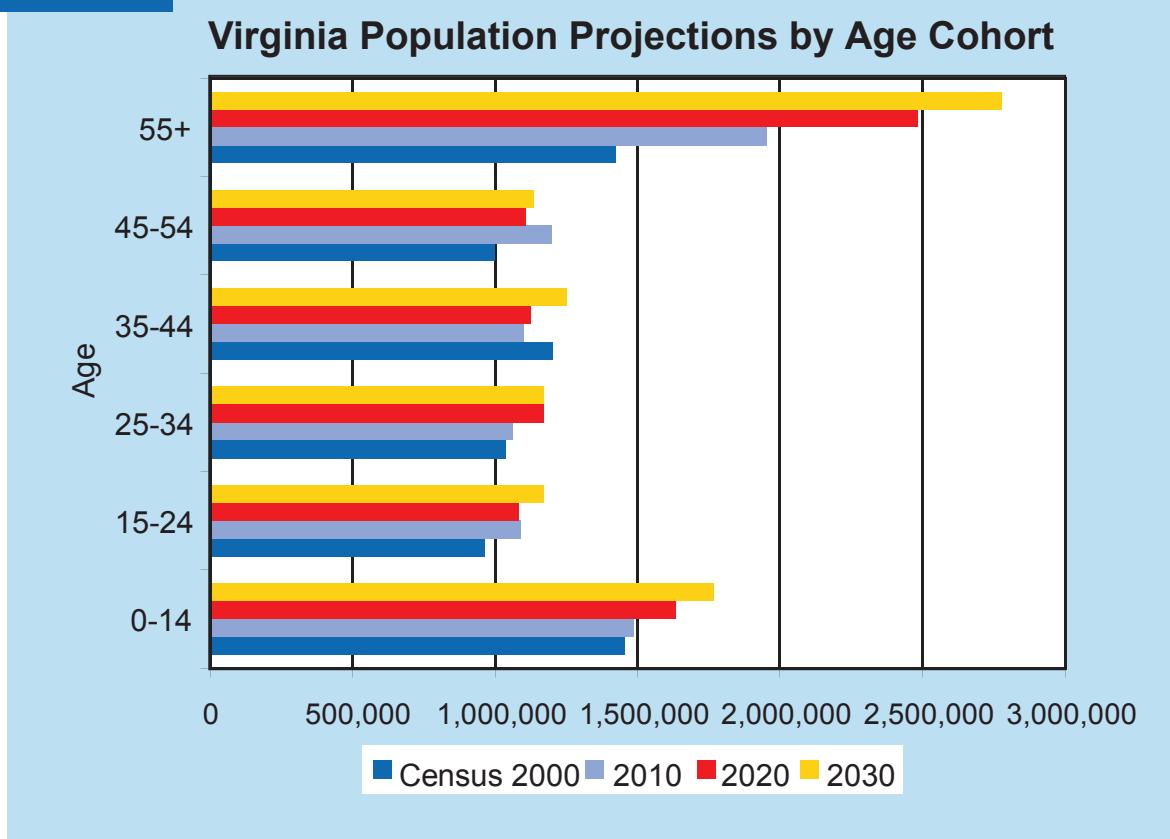


**Population**—Population demographics provide insight into the characteristics of the future labor force and are an important factor to consider in assessing Virginia's future labor supply.

Virginia's population growth is expected to continue over the next decade, but like the U.S., at a slower pace. Between 1990 and 2000, Virginia's population grew 14.4 percent, exceeding the national rate of 13.1 percent. Over the next decade, Virginia's population growth is expected to slow to 11.5 percent and continue to exceed the U.S. growth rate.

Between 2000 and 2010, the two older age cohorts are expected to be the fastest growing. (See Figure 1.)

*Figure 1*



Source: Virginia Employment Commission

The 55+ age cohort is projected to increase 37.2 percent, for a gain of almost 530,000. The share of Virginia's population that is 55 and older is projected to increase from 20 percent in 2000 to 25 percent in 2010 and ultimately 30 percent in 2030. (See Figure 2 on the following page.)

The 45-54 age cohort is projected to be the next fastest growing, increasing 19.8 percent between 2000 and 2010, for a gain of about 197,000. This cohort's share of total population is projected to increase from 14 percent in 2000 to 15 percent in 2010, but decline to 12 percent by 2030.

The 15-24 age cohort is also projected to experience double-digit growth over the 2000-2010 period, increasing 13.3 percent and adding 128,000 individuals. Despite this growth, this cohort's share of total population is expected to remain at about 14 percent in 2010 and drop to 13 percent in 2030. Between 2000-2010, the population in the 35-44 age cohort—a prime working age population—is projected to decline by 8.3 percent or 99,000. The share of Virginia's population in the 35-44 age cohort is expected to decline from 17 percent in 2000 to 14 percent in 2010 and 13 percent in 2030.

**Education**—Educational attainment in Virginia improved during the 1990s. A more highly educated workforce has the knowledge, skills, and abilities to attract well-paying jobs in high tech industries. In 2000, nearly 82 percent of the State's population age 25 and over was at least a high school graduate, surpassing the 75 percent from a decade ago. Despite this improvement, several areas of Virginia had significantly lower high school educational attainment than the state as a whole. Southwestern Virginia (LWIA I), South Central (LWIA VIII), and West Piedmont (LWIA XVII) had the lowest high school completion rates with 62.1 percent, 65.6 percent and 66.5 percent, respectively.

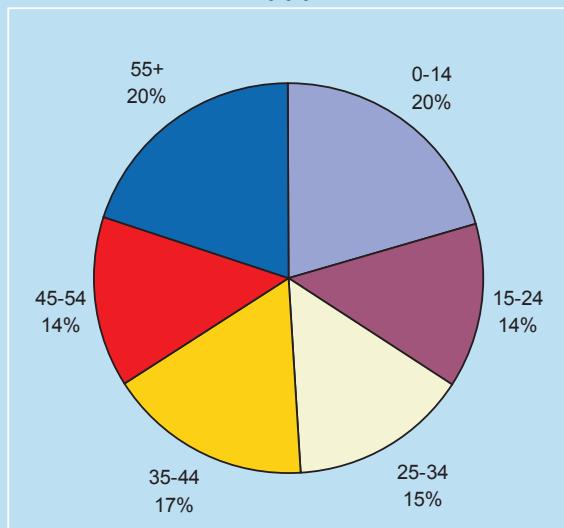
Virginia ranked 7th among states in the percentage of population age 25 and over with a Bachelors Degree or higher. In 2000, almost 30 percent of this population group earned a Bachelors Degree or higher, compared to just about 25 percent in 1990.



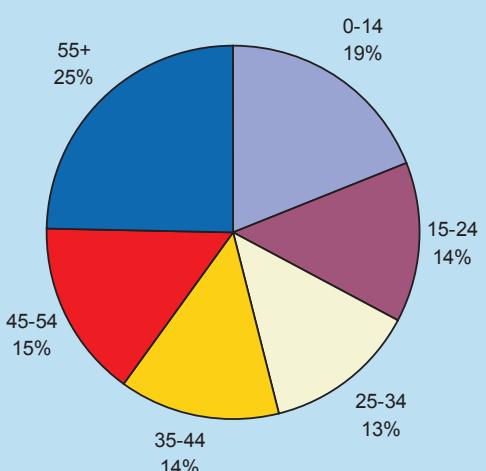
Figure 2

**Virginia Population Projections**

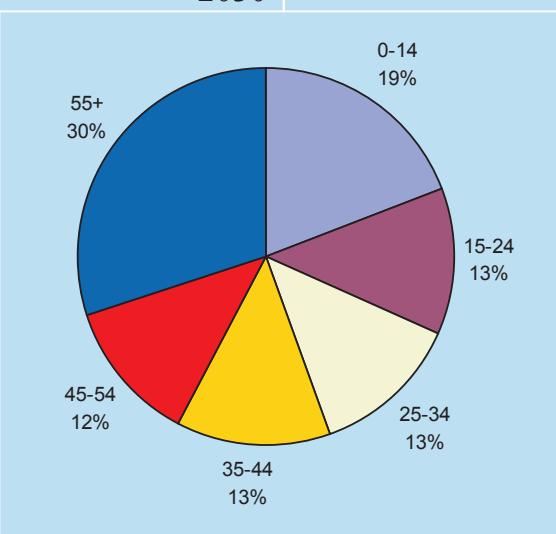
2000



2010



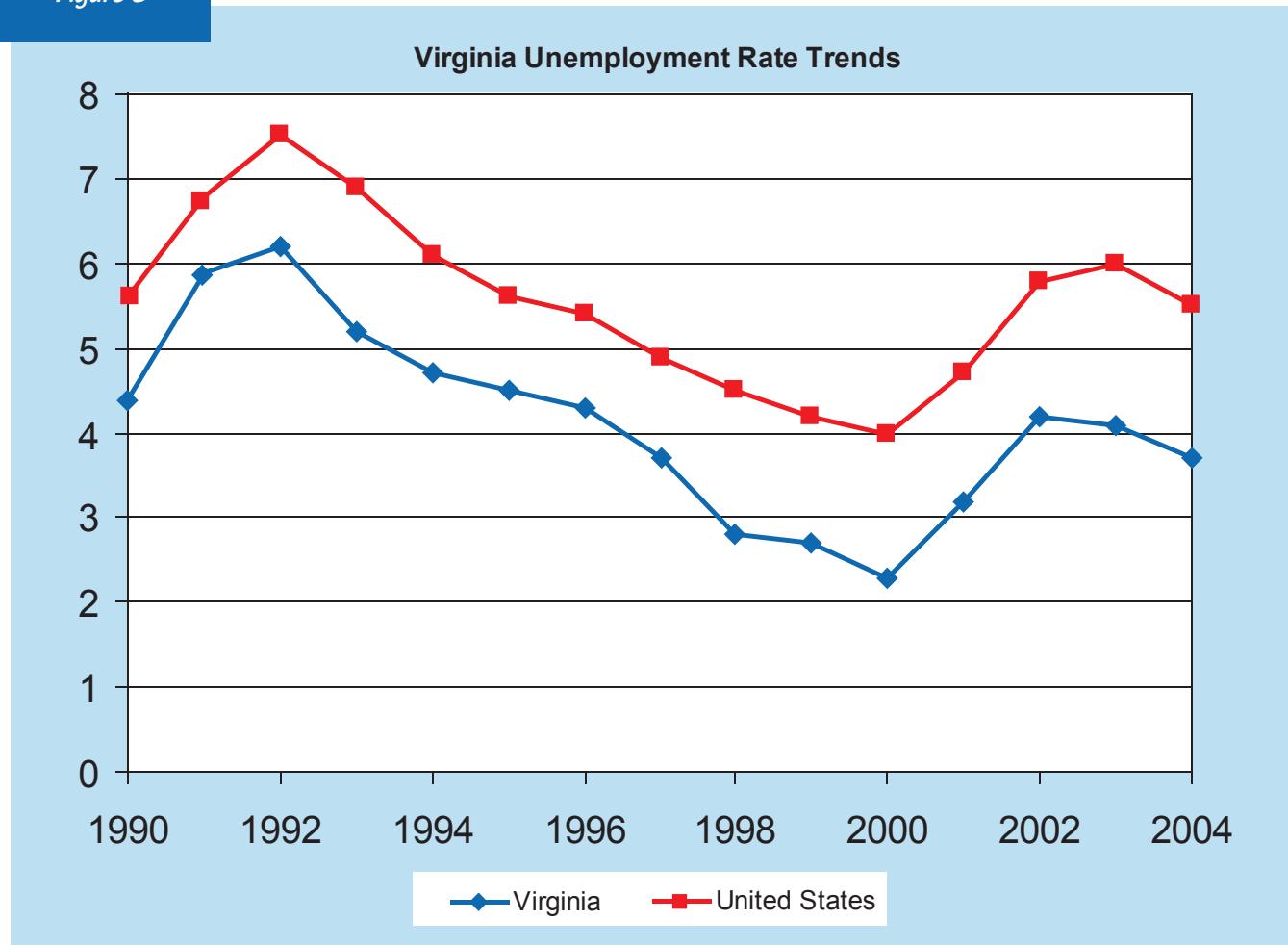
2030



Source: 2000 Census and Virginia Employment Commission

**Unemployment Rate Trends**—The unemployment rate is an indicator of labor market activity. Virginia's unemployment rate has been consistently below the national rate. (See Figure 3.) During the late 90's through 2000, Virginia experienced a period of extremely low unemployment, as a combination of explosive growth and low birth rates from the mid-1960s to the mid-1980s caused tight labor markets.

Figure 3



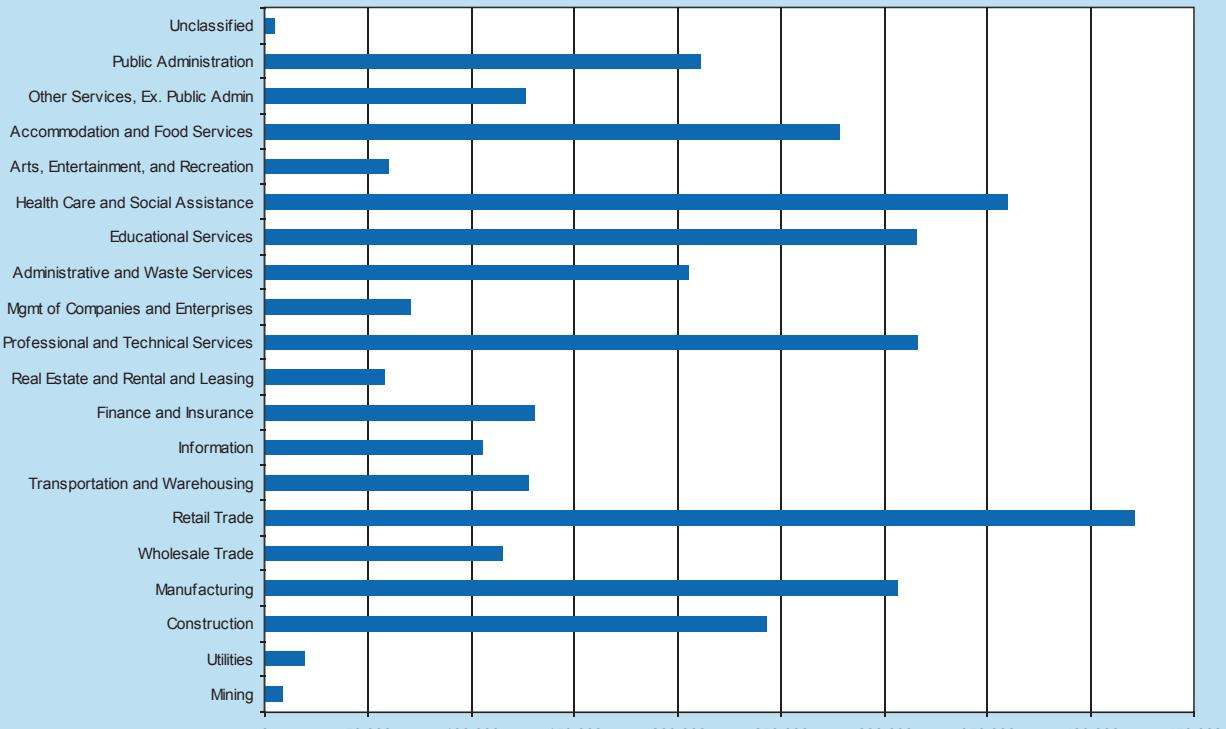
Source: Local Area Unemployment Statistics, Virginia Employment Commission

The average unemployment rate of 2.3 percent in 2000 is the lowest average ever recorded since 1950. Despite the increase in Virginia's unemployment rate following the last recession, the unemployment rate remained below the national rate. In 2004, Virginia's unemployment rate dropped to 3.7 percent and fell back within the full-employment range, renewing concerns about the likelihood of tight labor markets in some areas.

**Employment by Industry**—Occupational demand is closely linked to Virginia's industry composition and characteristics. Virginia's employment is concentrated in Retail Trade (12.0 percent), Health Care and Social Assistance (10.3 percent), Professional and Technical Services (9.0 percent), Educational Services (9.0 percent), Manufacturing (8.8 percent), and Accommodation and Food Services (8.0 percent). (See Figure 4.)

Figure 4

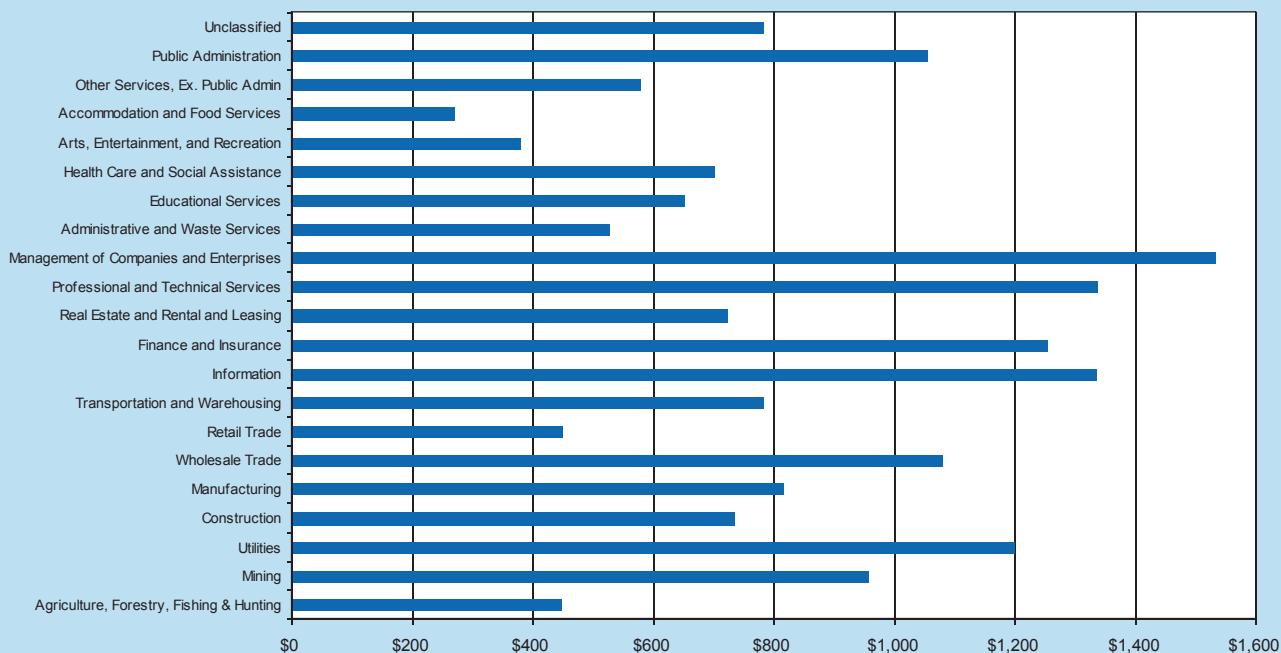
### Virginia Employment by Industry



Source: Covered Employment and Wages (includes full- and part-time employment), annualized 2004

In 2004, Professional and Technical Services and Construction were the fastest growing industries in both percent and absolute change. Professional and Technical Services employment increased 6.2 percent, for a gain of 17,800. Employment in the Construction industry grew 6.0 percent or by 13,000 jobs. Average weekly wages were highest in Management (\$1,533), Professional and Technical Services (\$1,338), Information (\$1,337), Finance and Insurance (\$1,255), and Utilities (\$1,200). (See Figure 5 on the next page.)

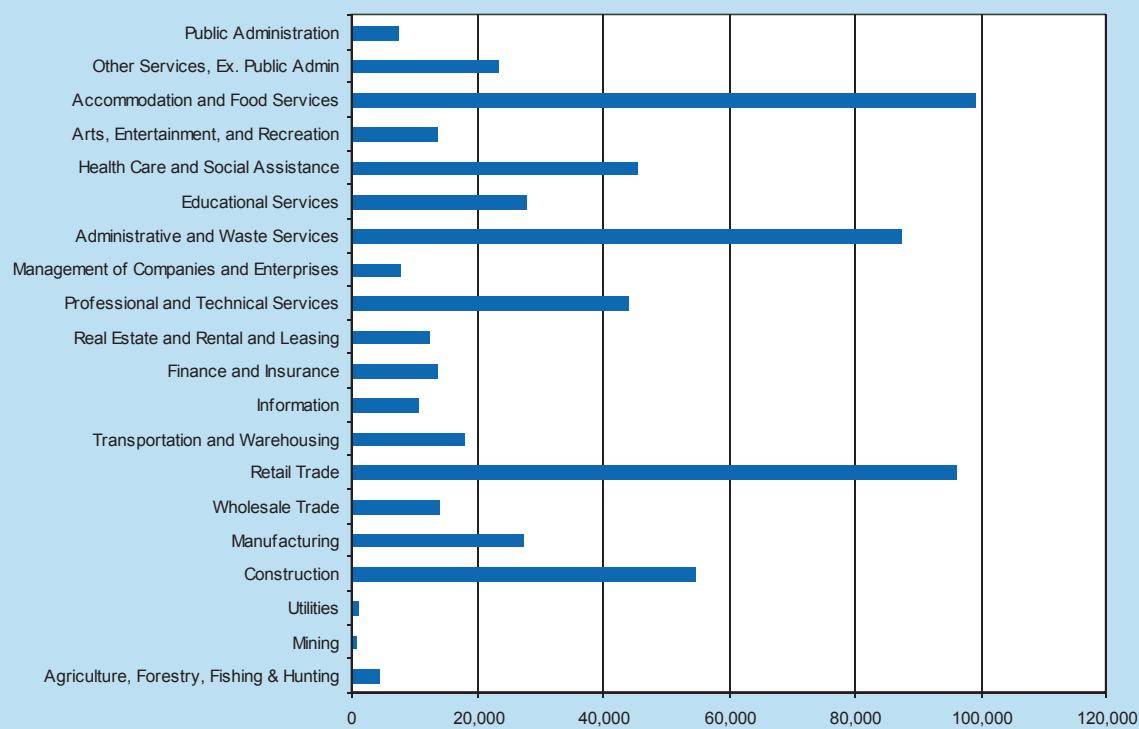
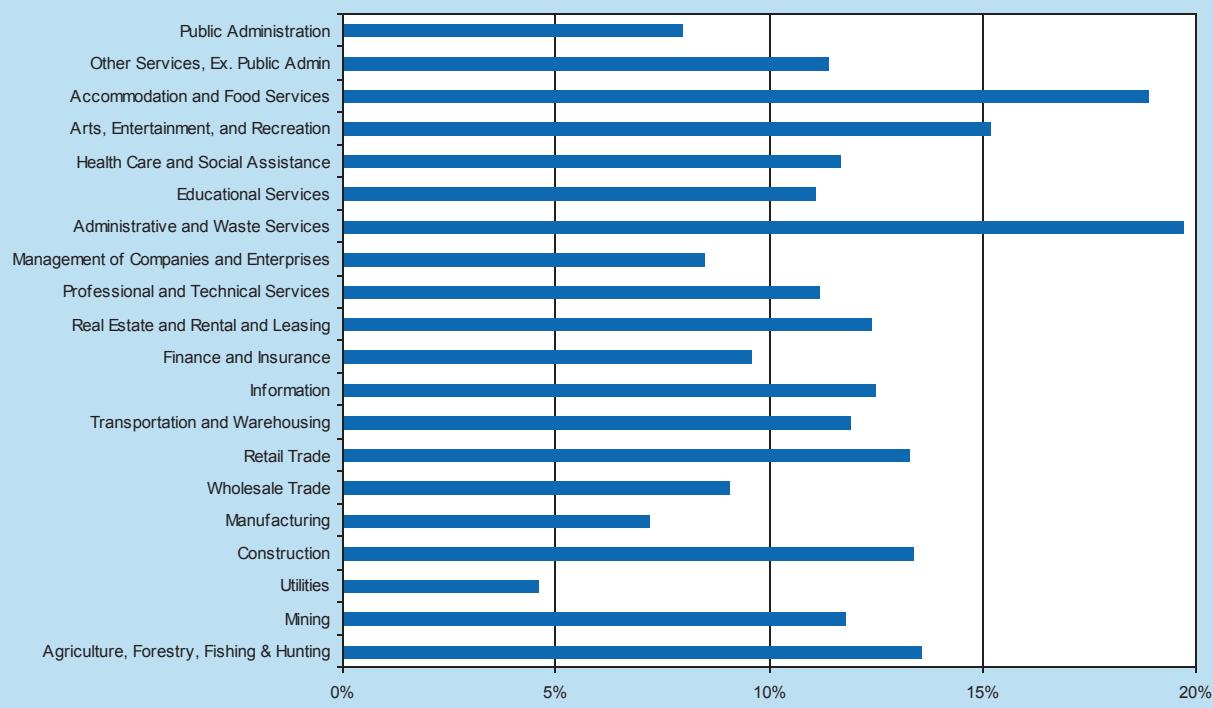
Figure 5

**Virginia Average Weekly Wage by Industry**

Source: Covered Employment and Wages, annualized 2004

**New Hires and Turnover by Industry**—According to the quarterly Local Employment Dynamics data from the Census, most of the recent new hires in Virginia have occurred in Accommodation and Food Services (16.3 percent), Retail Trade (15.8 percent), and Administrative and Waste Services (14.4 percent). (See Figure 6 on the following page.) This data also shows that higher personnel turnover has tended to take place in Administrative and Waste Services and Accommodation and Food Services, each approaching 20 percent turnover. (See Figure 7 on the following page.)

**Top 50 Employers in Virginia**—The 4th quarter 2004 quarterly census of employment and wages shows 203,488 employers in Virginia. The top 5 private employers in Virginia are Wal Mart, Newport News Shipbuilding, Food Lion, Sentara Health, and Inova Fairfax Hospital. The U.S. Department of Defense is the top federal government employer. Fairfax County Public Schools is the top local government employer. The largest state employer is the University of Virginia Health Services. For a complete listing of the top 50 employers in Virginia, see Appendix A.

**Figure 6****Virginia New Hires by Industry****Figure 7****Virginia Turnover by Industry**

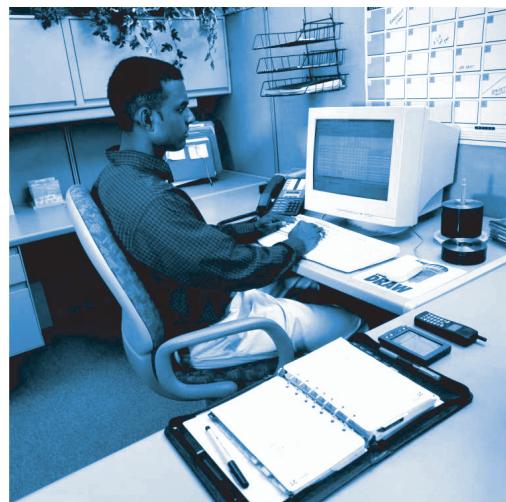
Source: U. S. Census Bureau, Local Employment Dynamics (LED) Program, average 2004q2 and prior 3 quarters



## State Workforce Needs

**Fastest-Growing Occupations**—The occupational employment projections show occupational demand based on forecasted industry growth. Over the 2002-2012 period, Management, Professional, and Related Occupations and Service Occupations are projected to be the fastest-growing major occupational groups, increasing 27.2 percent and 24.8 percent, respectively. The preferred education level of these varied jobs ranges from short-term on-the-job training to a master's degree.

Table 1 on the following page shows the top 25 fastest-growing occupations. In total, Computer Specialist occupations account for largest number of total job openings among the top 25 fastest-growing occupations. Over the 2002-2012 period, Computer Specialist occupations are projected to have over 42,000 total job openings, comprising over a third of the total openings of the 25 fastest-growing occupations. Two Computer Specialist occupations, Network Systems and Data Communications Analysts and Database Administrators, rank as the first and third fastest-growing occupations, respectively. The Business and Financial Operations occupational group accounts for the second-highest number of total job opening among the fastest-growing occupations. Collectively, Management Analysts, Personal Financial Advisors, and Tax Preparers account for over 22,000 total job openings. The Healthcare Support occupations have the third-largest number of total job openings, with over 19,000. Medical Assistants and Physical Therapist Aides rank as the second and fourth fastest-growing occupations, respectively. While Veterinary Technologists and Technicians is the fifth fastest-growing occupation, the projected number of total job openings is small. Security guards rank only 24th among the fastest growing, but has projected total job openings of nearly 16,000 over the 2002-2012 period.



**Table 1**

**SPECIFIC OCCUPATIONS WITH THE LARGEST PERCENT INCREASE IN EMPLOYMENT (INCREASE > 499)**  
**Virginia 2002 – 2012**

Rank	Occupational Title	Employment			Openings		
		Estimated 2002	Projected 2012	% Change	Replacements	Growth	Total
1	Network Systems and Data Communications Analysts	5,507	9,308	69.02%	648	3,801	4,449
2	Medical Assistants	7,206	12,146	68.55%	1,333	4,940	6,273
3	Database Administrators	4,911	7,864	60.13%	508	2,953	3,461
4	Physical Therapist Aides	916	1,456	58.95%	153	540	693
5	Veterinary Technologists and Technicians	1,169	1,847	58.00%	152	678	830
6	Physical Therapist Assistants	1,229	1,918	56.06%	205	689	894
7	Personal Financial Advisors	2,072	3,220	55.41%	269	1,148	1,417
8	Computer Software Engineers, Applications	24,293	37,650	54.98%	2,402	13,357	15,759
9	Medical Records and Health Information Technicians	3,353	5,127	52.91%	480	1,774	2,254
10	Self-Enrichment Education Teachers	2,075	3,165	52.53%	255	1,090	1,345
11	Fitness Trainers and Aerobics Instructors	5,196	7,880	51.66%	1,192	2,684	3,876
12	Computer Software Engineers, Systems Software	18,660	28,293	51.62%	1,845	9,633	11,478
13	Home Health Aides	9,238	13,966	51.18%	1,210	4,728	5,938
14	Dental Hygienists	3,922	5,897	50.36%	334	1,975	2,309
15	Network and Computer Systems Administrators	12,274	18,451	50.33%	1,361	6,177	7,538
16	Environmental Engineers	1,606	2,402	49.56%	273	796	1,069
17	Dental Assistants	7,404	11,061	49.39%	2,070	3,657	5,727
18	Computer and Information Systems Managers	10,215	15,099	47.81%	1,855	4,884	6,739
19	Residential Advisors	1,310	1,913	46.03%	276	603	879
20	Management Analysts	30,973	45,216	45.99%	4,237	14,243	18,480
21	Tax Preparers	3,813	5,530	45.03%	628	1,717	2,345
22	Physical Therapists	2,987	4,303	44.06%	294	1,316	1,610
23	Occupational Therapists	1,717	2,473	44.03%	232	756	988
24	Security Guards	24,644	35,267	43.11%	5,363	10,623	15,986
25	Medical and Public Health Social Workers	1,364	1,939	42.16%	233	575	808

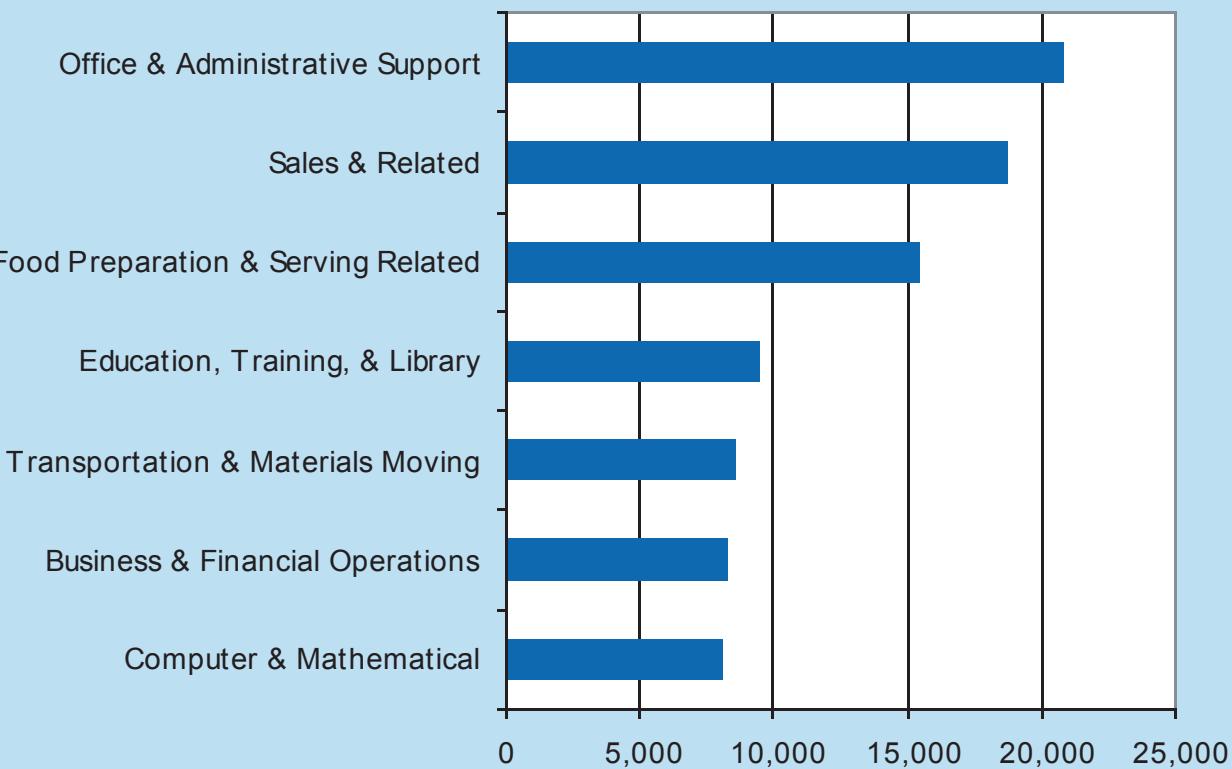
Source: Virginia Employment Commission

**Occupations with the Largest Number of Openings**—A look at the occupations with the largest number of total job openings over the 2000-2012 period provides another perspective. Between 2002 and 2012 there will be approximately 148,405 job openings each year in Virginia. Breaking this number down according to major occupational group shows that the largest number of annual openings, 20,834, is projected to occur in Office and Administrative Support. This group includes Office Supervisors, Communication Equipment Operators, Financial Clerks, Stock Clerks and Order Fillers, and Secretaries and Administrative Assistants. Office and Administrative Support is followed by Sales and Related Occupations – 18,749 average annual openings; Food Preparation and Service Related – 15,424 average annual openings; Education, Training, and Library – 9,460 average annual openings; Transportation and Materials Moving – 8,557 average annual openings, Business and Financial Operations – 8,304 average annual openings, and Computer and Mathematical – 8,062 annual average openings.<sup>1</sup> (See Figure 8.)

<sup>1</sup> A. Fletcher Mangum, “The Occupation-Driven Demand for Trained Workers in the Commonwealth: 2002-2012,” Mangum Economic Consulting, LLC, October 2005, p. 1.

Figure 8

### Highest Average Annual Job Openings, 2002 to 2012, by Major Occupational Group



Source: Virginia Employment Commission and Mangum Economic Consulting, LLC

**Occupational Gaps**<sup>2</sup>—To identify occupational gaps, likely workforce-driven demand for specific education and training programs, based on the projected changes in occupational employment, are compared with the likely supply of graduates from those programs. A crosswalk developed by the National Crosswalk Service Center (NCSC) is used to “map” occupations into the prerequisite education and training program(s) necessary for entry into that occupation.<sup>3</sup> The analysis is then further refined by using a classification scheme developed by the Bureau of Labor Statistics (BLS) to “sort” occupations according to the minimum degree or award required for employment in that occupation.<sup>4</sup> Through this combination of steps, the occupational employment projections are used to predict the workforce-driven demand for specific education and training programs.<sup>5</sup> To estimate the likely supply of graduates within those education and training programs identified in the demand analysis, we use data from the U. S. Department of Education’s Integrated Postsecondary Education Data System (IPEDS).<sup>6</sup> These data comprise all graduates from Virginia’s four-year public, two-year public, four-year private non-profit, four-year career, and two-year career colleges and universities in academic year 2002-03.

In interpreting the results of this analysis, there are at least three methodological limitations that the reader should keep in mind. First, the scope of the analysis is limited by the occupations contained in the NCSC crosswalk and the BLS education and training classification scheme. If an occupation is not included in both of those taxonomies, it is not included in this analysis. Similarly, the education and training programs contained in the NCSC crosswalk also limit the scope of the analysis. As a rule, this means that the only programs included in the analysis are those that are closely associated with one or more specific career paths. General programs, like General Studies or Liberal Arts, that provide a broad postsecondary educational experience, which prepares students for general employment, are excluded from the analysis.

<sup>2</sup> Mangum, pp. 2-7.

<sup>3</sup> The National Crosswalk Service Center (NCSC) is funded by the U.S. Department of Labor, Employment and Training Administration. The specific NCSC crosswalk used in this analysis is the 2000 Standard Occupational Classification Crosswalk to 2000 Classification of Instructional Programs. This crosswalk identifies the prerequisite instructional programs (classified according to the National Center for Educational Statistics’ 2000 Classification of Instructional Program, or CIP, code) necessary for employment in 1,364 specific occupations (classified according to the Bureau of Labor Statistics’ 2000 Standard Occupational Classification, or SOC, code).

Often, these are many-to-many relationships where a given instructional program can serve as an avenue into one of many jobs, or one of several instructional programs can serve as a prerequisite for a given job.

<sup>4</sup> The Bureau of Labor Statistics classifies occupations according to eleven education and training categories. Four of these involve on-the-job training or work experience only and the remaining seven require some level of postsecondary education (i.e., first-professional degree, doctoral degree, master’s degree, bachelor’s degree, associate’s degree, or postsecondary vocational training). For purposes of this study, we restrict the analysis to occupations that fall within these seven education and training categories.

<sup>5</sup> More formally, the demand for education and training programs is calculated as:

$$DCIP_i = \sum Dcip_{ij}$$

Where,

$$Dcip_{ij} = (SOC_j)(GCIP_i / \sum Gcip_{ij})$$

and,

DCIP<sub>i</sub> = the annual demand for instructional program i

$\sum Dcip_{ij}$  = the annual demand for instructional program i across all occupation(s) j

SOC<sub>j</sub> = the projected annual openings for occupation j

GCIP<sub>i</sub> = Virginia graduates from instructional program i

$\sum Gcip_{ij}$  = Virginia graduates from all instructional program(s) i related to occupation j

<sup>6</sup> “Integrated Postsecondary Education Data System,” National Center for Education Statistics,

U.S. Department of Education <<http://nces.ed.gov/ipeds/>>.

Second, the accuracy of the analysis is dependent on the accuracy of VEC's occupational employment projections and on the accuracy of NCSC's crosswalk. That accuracy is likely to be higher in established occupations, like teaching and nursing where employment trends and educational requirements are well established, than in evolving occupations like those in the technology field.

Third, the analysis implicitly assumes that recent graduates from Virginia education and training programs fill all new openings. As a result, it does not take into account the in-migration of workers trained in other states, or the churning of previously trained workers within Virginia as they move from job to job.

For these reasons, the assessment of likely workforce-driven demand for specific education and training programs developed in this study is best used as an indicator of relative demand across programs and not as a precise measure of demand.

Table 2 on the following page identifies those programs where a comparison of the likely workforce-driven demand for graduates from specific education and training programs with the likely supply of graduates indicates a potential annual shortage of 200 or more. As the data contained in Table 2 indicate, the largest gaps tend to be in accounting, computer, education, and healthcare related occupations.



**Table 2****Occupational Gap Analysis**

DEGREE	DEMAND			SUPPLY			GAP
	SOCCODE	SOCTITLE	Annual Demand	CIPCODE	CIPTITLE	Annual Supply	
MA	193021	Market Research Analysts	295	450601	Economics, General	76	219
BA	132011	Accountants and Auditors	1,616	520301	Accounting	768	848
BA	151021	Computer Programmers	1,116	521201	Management Information Systems, General	317	799
BA	252021	Elementary School Teachers, Except Special Education	715	131206	Teacher Education, Multiple Levels	49	666
BA	252021	Elementary School Teachers, Except Special Education	656	131202	Elementary Education and Teaching	45	611
BA	151051	Computer Systems Analysts	1,379	110101	Computer and Information Sciences, General	834	545
BA	151031	Computer Software Engineers, Applications	750	141001	Electrical, Electronics, and Communication Engineering	303	447
BA	151031	Computer Software Engineers, Applications	547	140901	Computer Engineering, General	221	326
BA	252031	Secondary School Teachers, Except Special and Vocational Education	541	131314	Physical Education Teaching and Coaching	300	241
BA	151032	Computer Software Engineers, Systems Software	599	110401	Information Science/Studies	365	234
Assoc.	291111	Registered Nurses	2,629	511601	Nursing - Registered Nurse Training (RN, ASN, BSN, MSN)	1,007	1,622
Assoc.	151041	Computer Support Specialists	1,029	110301	Data Processing and Data Processing Technology/Technician	17	1,012
Assoc.	292071	Medical Records and Health Information Technicians	225	510707	Health Information/ MedicalRecords Technology/Technician	11	214
Cert.	493023	Automotive Service Technicians and Mechanics	866	470604	Automobile/Automotive Mechanics Technology/Technician	79	787
Cert.	292061	Licensed Practical and Licensed Vocational Nurses	843	511613	Licensed Practical/Vocational Nurse Training (LPN, LVN, Cert, Dipl, AAS)	566	277

**Fastest-Declining Occupations**—Table 3 shows the top 25 occupations with the largest percent decrease in employment between 2002 and 2012. Word Processors and Typists is ranked first, with a projected decline of 37.4 percent. There are five other Office and Administrative Support occupations ranked in the top 25: Meter Readers (15), Computer Operators (19), Eligibility Interviewers, Government Programs (22), and Loan Interviewers and Clerks (23). Textile Bleaching and Dyeing Machine Operators and Tenders is ranked second and projected to decrease 33.3 percent. There are five other occupations in the Textile, Apparel, and Furnishings Workers occupation group that are ranked in the top 25: Textile knitting and Weaving Machine Setters, Operators, and Tenders (5), Textile Winding, Twisting, and Drawing Out Machine Setters, Operators, and Tenders (6), Extruding and Forming Machine Setters, Operators and Tenders, Synthetic or Glass Fibers (7), Sewing Machine Operators (11), and Upholsterers (13). Radio Mechanics and Fallers are ranked third and fourth, respectively, and are projected to decline about 31 percent.

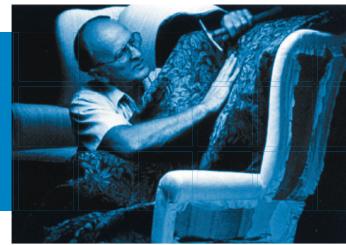
Table 3

### SPECIFIC OCCUPATIONS WITH THE LARGEST PERCENT DECREASE IN EMPLOYMENT (DECREASE > 99) Virginia 2002 – 2012

Rank	Occupational Title	Employment			Openings		
		Estimated 2002	Projected 2012	% Change	Replacements	Growth	Total
1	Word Processors and Typists	2,435	1,523	-37.45%	537	0	537
2	Textile Bleaching & Dyeing Machine Operators & Tenders	1,037	691	-33.37%	265	0	265
3	Radio Mechanics	425	290	-31.76%	88	0	88
4	Fallers	533	367	-31.14%	98	0	98
5	Textile Knitting & Weaving Machine Strrs, Oprtrs, & Tndrs	1,614	1,114	-30.98%	181	0	181
6	Textile Windg/Twistg/Drawg Out Mchn Strrs/Oprtrs/Tndrs	1,928	1,363	-29.30%	359	0	359
7	Extrudg/Formg Mchn Strrs/Oprtrs/Tndrs, Synthtc/Gls Fbrs	1,345	959	-28.70%	261	0	261
8	Roof Bolters, Mining	468	338	-27.78%	85	0	85
9	Logging Equipment Operators	1,301	966	-25.75%	240	0	240
10	Electrical and Electronic Equipment Assemblers	3,998	3,023	-24.39%	945	0	945
11	Sewing Machine Operators	7,777	5,939	-23.63%	963	0	963
12	Chemical Plant and System Operators	593	463	-21.92%	184	0	184
13	Upholsterers	1,045	829	-20.67%	265	0	265
14	Coil Winders, Tapers, and Finishers	644	514	-20.19%	152	0	152
15	Meter Readers, Utilities	1,241	1,034	-16.68%	391	0	391
16	Announcers	1,228	1,024	-16.61%	311	0	311
17	Continuous Mining Machine Operators	904	755	-16.48%	257	0	257
18	Chemical Equipment Operators and Tenders	1,334	1,127	-15.52%	426	0	426
19	Computer Operators	4,544	4,014	-11.66%	967	0	967
20	Paper Goods Machine Setters, Operators, and Tenders	3,874	3,490	-9.91%	823	0	823
21	Telecommnctns Eqpmnt Installrs/Repairrs, Ex Line Instllrs	6,446	5,820	-9.71%	1,334	0	1,334
22	Eligibility Interviewers, Government Programs	2,395	2,192	-8.48%	638	0	638
23	Loan Interviewers and Clerks	5,263	4,833	-8.17%	721	0	721
24	Woodworking Machine Strrs/Oprtrs/Tndrs, Excpt Sawing	4,706	4,374	-7.05%	1,236	0	1,236
25	Prepress Technicians and Workers	2,363	2,199	-6.94%	554	0	554

Source: Virginia Employment Commission

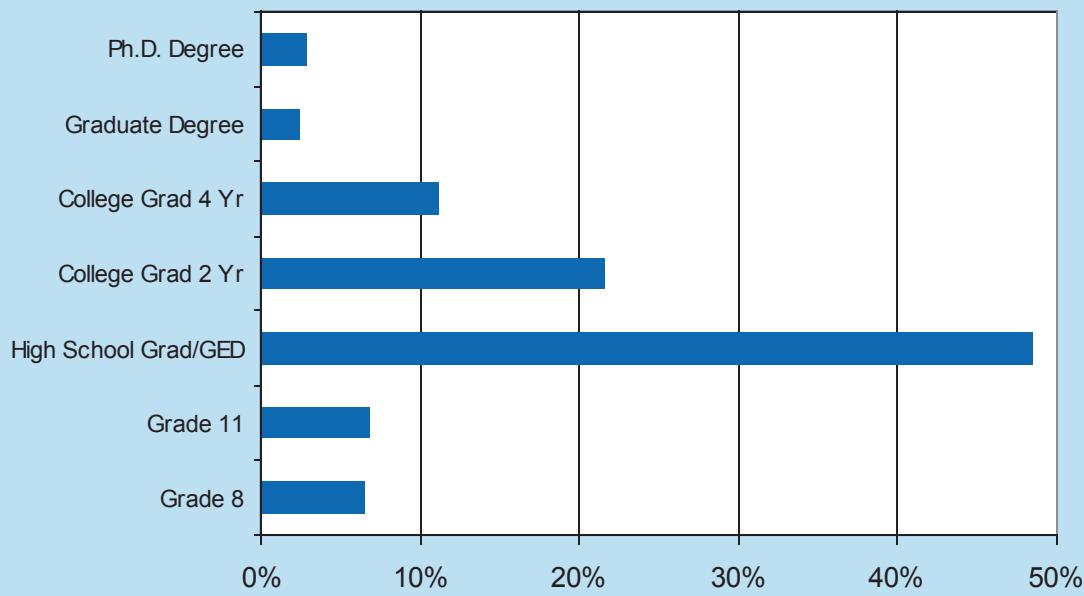
## State Workforce Supply



**Characteristics of the Unemployed**—Unemployed individuals are available for immediate hire and are an important source of labor supply. Monthly data that is collected when unemployed individuals apply for unemployment insurance benefits provide information on the various characteristics of the unemployed claimants. In September, approximately 7 out of 8 claimants in Virginia had a 12th grade education level or higher. (See Figure 9.) Claimants with a high school education level accounted 49 percent of all claimants and claimants with an associate's degree or higher accounted for 38 percent of the total.

Figure 9

### Virginia Unemployed Claimants by Education Level



Source: Virginia Employment Commission, ES203 September 2005

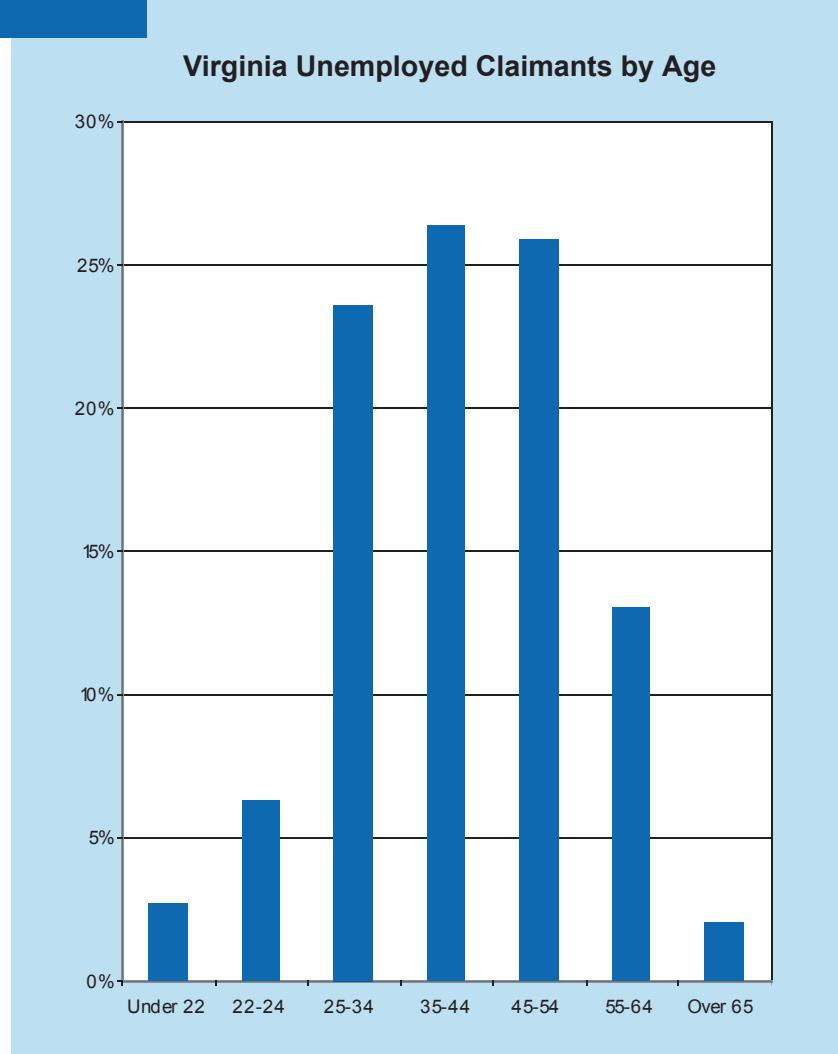
Production Workers comprised the largest category of unemployed individuals, with 22 percent of the total in September 2005. (See Table 4.) Office and Administrative Support workers also accounted for a significant share, comprising 14 percent of the total. Figure 10 on the following page shows that in September just over 75 percent of the claimants were in the 25-54 age range and were almost evenly distributed across the 25-34, 35-44, and 45-54 age categories.

Table 4

Occupation	Number of Claimants
Management	2,835
Business and Financial Operations	1,110
Computer and Mathematical	1,047
Architecture and Engineering	436
Life, Physical, and Social Science	145
Community and Social Services	287
Legal	187
Education, Training, and Library and Media	780
Healthcare Practitioners and Technical	487
Healthcare Support	851
Protective Services	426
Food Preparation and Serving Related and Maintenance	1,261
Personal Care and Service	368
Sales and Related	2,853
Office and Administrative Support	4,788
Farming, Fishing, and Forestry	85
Construction and Extraction	2,249
Installation, Maintenance, and Repair	1,518
Production	7,110
Transportation and Material Moving	2,827
Military Specific	139
<b>Total</b>	<b>33,030</b>

Source: Virginia Employment Commission, ES203 September 2005

Figure 10



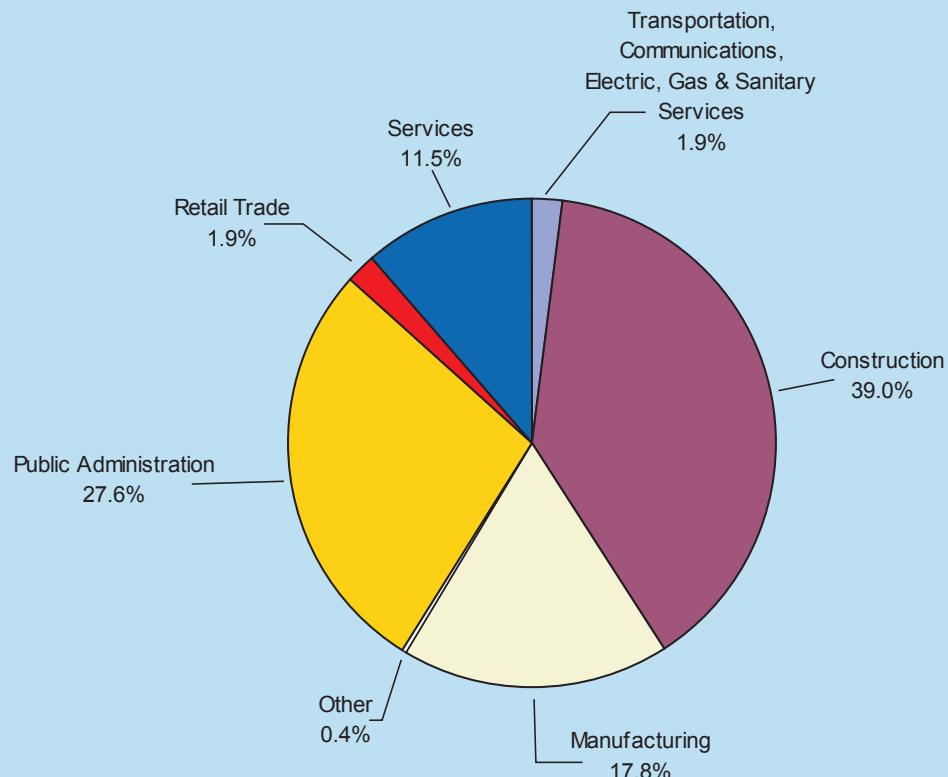
Source: Virginia Employment Commission, ES203 September 2005

**Apprenticeship Programs and Completion Rates**—Information on registered apprenticeship program participation and number of Certificates of Completion issued present another dimension of Virginia’s workforce supply. Registered apprenticeship is an agreement between an employer who needs a skilled worker and an individual who wants to earn a living while learning. The registered apprenticeship system trains employees in over 300 occupations in Virginia and helps businesses develop and maintain a skilled, dedicated workforce. Approximately 2,000 Virginia employers in all sectors of the economy, including manufacturing, construction, services, and technology, currently use this system to meet their skill training needs.

In 2004, Virginia's registered apprentices worked in a variety of industries, as illustrated in Figure 11. The average age of registered apprentices in Virginia is 29. From July 1, 2004 through June 30, 2005, electrician was the top occupation in number of active apprentices, with 2,800 or 23 percent of the total number of active apprentices. With 6 percent of the total number of active apprentices, electronics mechanic, cosmetologist, and plumber were ranked second, third, and fourth, respectively, with 713, 707, and 685 active apprentices. Environmental control systems occupation was ranked fifth, with 525 active apprentices or 4 percent of the total. Over the July 1, 2004 through June 20, 2005 period, two occupations accounted for over a third of the certificates issued. Electricians were issued the largest number of certificates, with 343 or almost 21 percent of the total. Cosmetologists were ranked second in number of certificates issued with 221 or over 13 percent.

Figure 11

### Virginia's Registered Apprentices by Industry 2004



Source: DOLI 2004 Annual Report

**Retirees**—Retirees or those approaching retirement are another important factor to consider in assessing Virginia’s future labor supply. Retirees are reentering the workforce for various reasons; and according to a survey by the AARP, 79 percent of Baby Boomers expect to work in retirement.<sup>7</sup> As retirees anticipate living longer, they are returning to work because they need the money and health benefits. Some of these retirees experienced a decline in the value

of their stock and have been affected by eroding retirement benefits. Although some retirees are returning to work for financial reasons, others are choosing the work because they want to stay mentally active. These retirees want to continue to be productive and make a contribution by performing meaningful work.



In Virginia, the 55-64 and 65+ age cohorts are the fastest growing. On average, slightly over 50,000 Virginians turn 65 every year. The number of Virginians 65 years and over in the labor force has been trending upward since early in the decade despite a dip in 2004. Over the 2001-2004 period, the civilian labor force 65 years and over in Virginia has increased 13.8 percent, while the civilian non-institutional population for this group increased only 3.1 percent. The labor force participation rate for the 65 years and over cohort was 15 percent in 2004, up from 13.5 percent in 2001.

**Exiting Military**—The military has a significant presence in Virginia and as personnel exit, the military provides a skilled potential labor source for Virginia. According the 2003 Survey of Retired Military from Defense Manpower Data Center, 71 percent of retired military are in the labor force—69 percent of the military retirees are employed and 2 percent are unemployed. These retirees are well educated with almost all having at least a high school education by the time they leave the service and almost a third have a bachelor’s degree or better.



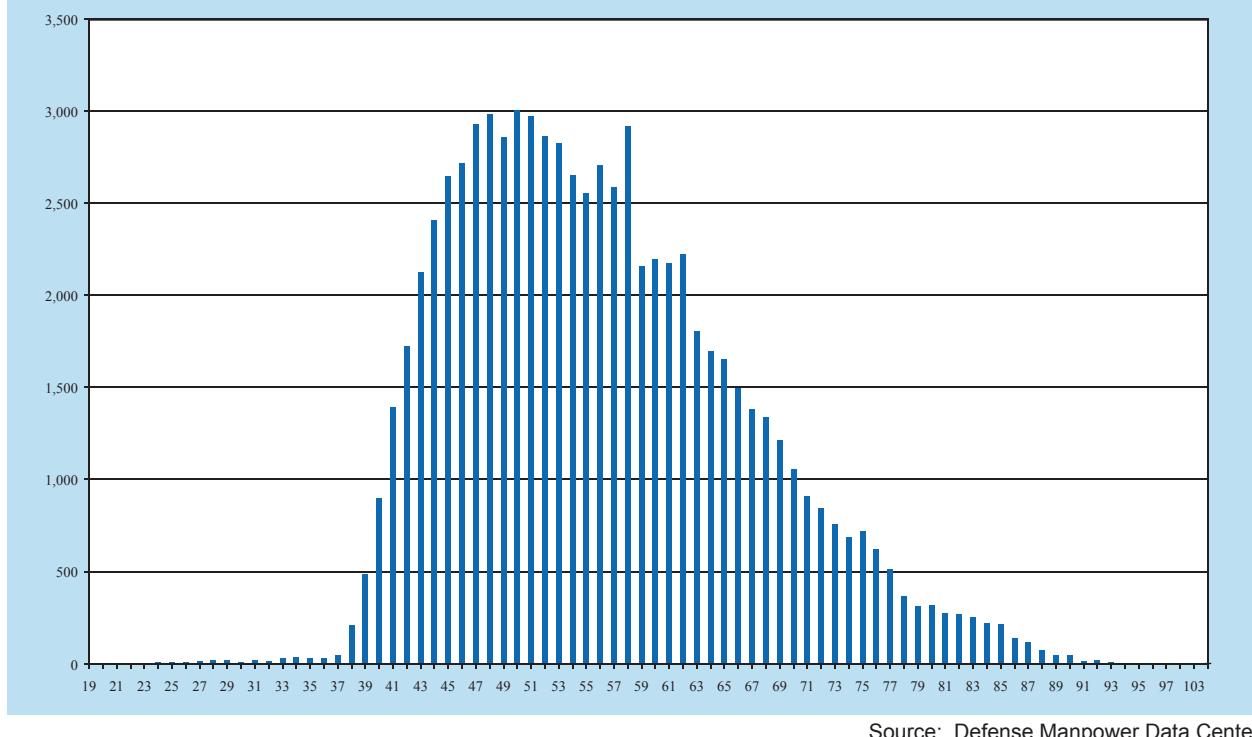
<sup>7</sup> AARP, “Baby Boomers Envision Retirement II: Survey of Baby Boomers’ Expectations for Retirement,” May 2004 <http://www.aarp.org/money/careers/employerresourcecenter/researchanddata/a2004-08-10-envisionret.html>.

As of September 2005, there were almost 77,000 military retirees in Virginia. Of those retirees, the largest group, nearly 36 percent, retired after they served 20 years. The mean age of Virginia's military retirees is 56 and nearly two-thirds of the retirees are between the ages of 45-64. (See Figure 12.)

As of September 30, 2005, there were approximately 744,000 veterans in Virginia. The education benefit figures for Virginia show that 63,423 eligible veterans trained under Chapter 30 of the Montgomery GI Bill and 14,390 Selected Reserve members trained under Chapter 1606 of the Montgomery GI Bill as of September 30, 2005.

Figure 12

Age Distribution of Virginia Military Retires As of September 2005



Source: Defense Manpower Data Center

**International and Internal Migration**—People moving into Virginia from other countries and states are an important component of Virginia's labor market—with migration, employment growth is not constrained by current population and labor supply. Over a four-year period, 2000-2004, net migration in Virginia totaled 203,084. Net migration from other countries accounted for 57 percent of the total or 115,500. Net internal migration accounted for the remaining 87,500. Illegal workers, while not capture in the migration figures, are a market-driven component of the labor force some areas and may be a factor to consider when assessing labor supply in these areas of Virginia.

**Prison Re-entry**—Inmates realeased from state institutions and local jails are another potential labor supply source. Approximately 10,000 inmates are released from state institutions each year. They average 35 years of age. A third of them are under 30 years of age. Forty-six percent of those inmates released from state institutions participated in either academic or vocational programming. Of those 46 percent, about 10-15 percent were vocational program participants.

## Regional Workforce Needs



## Regional Workforce Needs

During the summer of 2005, the Virginia Economic Development Partnership and the Virginia Community College System presented the results of a joint project to identify industry-based and skills-based clusters for nineteen regions across the state. Traditional industry cluster analysis was used to group industries that share a similar customer and supplier network, while occupational cluster analysis was used to group industries that draw from the same pool of skilled workers. Using data provided by the Virginia Employment Commission (VEC) and the combination of both cluster methods, the analysis identified industry recruitment targets that are a good fit for each region, both in terms of their connection to the existing or emerging regional industry base, and in terms of their compatibility with the region's workforce.

For each of the nineteen regions of the study, the following tables of information have been provided:

- **Existing Industry Clusters**

A complete list of the industry clusters that have been identified using industry-by-industry purchase data to group industries that have a strong customer-supplier relationship. These industries are ranked by 2004 employment.

- **Emerging Industry Clusters**

Additional industry clusters were identified for each region by looking for existing industries that exhibited high growth<sup>8</sup> and were *not* members of a regional cluster, but were identified as members of a national cluster. These industries have the potential to drive the formation of a new regional cluster and were labeled "emerging." Again, these industries are ranked by 2004 employment.

- **Top 25 Occupations for Existing Industry Clusters**

Combining all of the existing industry clusters in the aggregate, staffing pattern data from the VEC was applied to regional industry employment to generate the required employment by occupation. The top twenty-five occupations, by 2004 employment, are listed here.

- **Top 25 Occupations for Emerging Industry Clusters**

Combining all of the emerging industry clusters in the aggregate, staffing pattern data from the VEC was applied to regional industry employment to generate the required employment by occupation. The top twenty-five occupations, by 2004 employment, are listed here.

---

<sup>8</sup>As measured by employment growth over the past year.

- **Existing Clusters, Industry List**

and

- **Emerging Clusters, Industry List**

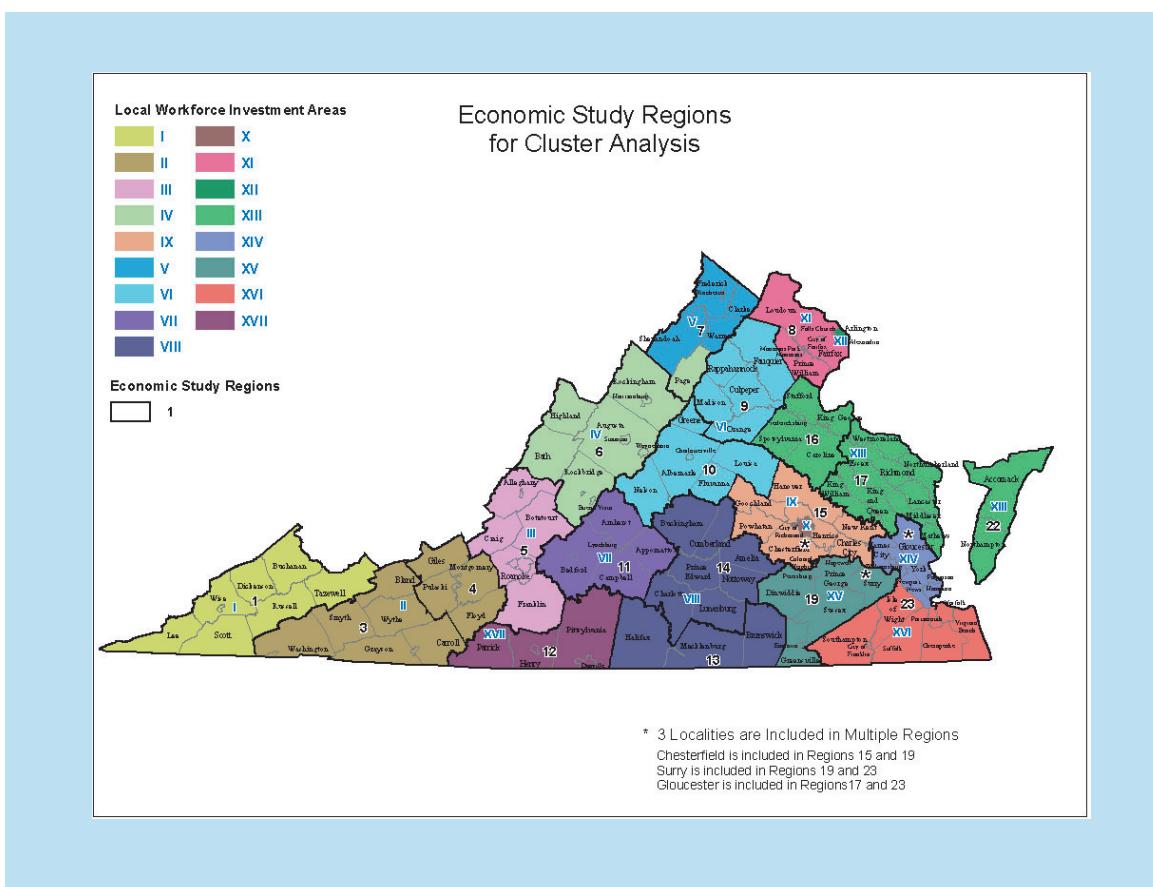
Member industries (4-digit NAICS) are listed for each cluster, with industries left out if employment did not exceed 10 employees in 2004. Clusters are listed in alphabetical order, but individual industries are ranked in descending order by 2004 employment.

- **Top 25 Skills-Based Industry Targets for Displaced Workers**

This table displays the top 25 skill-based industry recruitment targets for the region, based on a comparison of the skills inherent to the region's displaced workers, and the skill requirements of individual industries. A total of 295 industries were ranked.

Additional information on the data and methodology for the industry-based and occupation-based cluster analysis can be found on the VEDP's Virginia Ally Information Exchange website at: <http://www.virginiaallies.org/research.asp#cluster>.

The map below illustrates the overlap between the cluster study regions and the local workforce investment areas. Where the regions do not match perfectly, in most cases two or more cluster regions can be combined to match a local workforce investment area. In many cases, the regions overlap completely.



**Virginia Coalfield Existing Industry Clusters**  
(ranked by 2004 employment)

**HEALTH CARE  
MINING\***  
**DISTRIBUTION & WAREHOUSING**  
**WOOD PRODUCT MANUFACTURING**  
**METALS AND RELATED MANUFACTURING**  
**NONMETALLIC MINERALS & RELATED PRODUCTS\***  
**AGRICULTURE, FORESTRY, AND FISHING\***

Top 25 Occupations for Existing Industry Clusters	Estimated Employment, 2004q4
Registered Nurses	1,124
Truck Drivers, Heavy and Tractor-Trailer	952
Nursing Aides, Orderlies, and Attendants	758
Excavating and Loading Machine and Dragline Operators	527
Continuous Mining Machine Operators	495
Licensed Practical and Licensed Vocational Nurses	386
Office Clerks, General	344
First-Line Supervisors/Managers of Construction Trades and Extraction Workers	305
Maintenance and Repair Workers, General	302
Laborers and Freight, Stock, and Material Movers, Hand	288
Operating Engineers and Other Construction Equipment Operators	277
Roof Bolters, Mining	273
Home Health Aides	272
Mobile Heavy Equipment Mechanics, Except Engines	266
Truck Drivers, Light or Delivery Services	261
General and Operations Managers	226
Maids and Housekeeping Cleaners	166
Loading Machine Operators, Underground Mining	157
Personal and Home Care Aides	157
Electricians	149
First-Line Supervisors/Managers of Production and Operating Workers	145
Industrial Truck and Tractor Operators	135
Emergency Medical Technicians and Paramedics	126
Bookkeeping, Accounting, and Auditing Clerks	125
First-Line Supervisors/Managers of Transportation and Material-Moving Machine Operators	123

**Virginia Coalfield Emerging Industry Clusters**  
(ranked by 2004 employment)

**INFORMATION TECHNOLOGY AND PROFESSIONAL SERVICES**  
**FINANCE AND INSURANCE**  
**TEXTILES & APPAREL\***

\* These clusters have low growth potential and therefore would not be considered as “target” clusters, although individual industries may have good growth potential.

Top 25 Occupations for Emerging Industry Clusters	Estimated Employment, 2004q4
Sewing Machine Operators	98
Insurance Sales Agents	75
Customer Service Representatives	56
Office Clerks, General	51
Civil Engineers	45
Electrical Engineers	41
General and Operations Managers	37
Computer Systems Analysts	29
Secretaries, Except Legal, Medical, and Executive	28
Management Analysts	27
Claims Adjusters, Examiners, and Investigators	24
Architects, Except Landscape and Naval	24
First-Line Supervisors/Managers of Office and Administrative	23
Executive Secretaries and Administrative Assistants	23
Computer Software Engineers, Systems Software	21
Receptionists and Information Clerks	21
Computer Software Engineers, Applications	20
Bookkeeping, Accounting, and Auditing Clerks	20
Veterinary Assistants and Laboratory Animal Caretakers	20
Architectural and Civil Drafters	20
Civil Engineering Technicians	20
Accountants and Auditors	20
Insurance Underwriters	20
Engineering Managers	18
Computer Programmers	18

<b>Existing Clusters, Industry List: Virginia Coalfield</b>	
AGRICULTURE, FORESTRY AND FISHING	
Cattle Ranching and Farming	
Support Activities for Forestry	
Vegetable and Melon Farming	
Support Activities for Animal Production	
Other Animal Production	
DISTRIBUTION & WAREHOUSING	
Specialized Freight Trucking	
General Freight Trucking	
Warehousing and Storage	
Other Support Activities for Transportation	
Automotive Equipment Rental and Leasing	
Support Activities for Rail Transportation	
Support Activities for Air Transportation	
Freight Transportation Arrangement	
HEALTH CARE	
General Medical and Surgical Hospitals	
Nursing Care Facilities	
Home Health Care Services	
Community Care Facilities for the Elderly	
Other Ambulatory Health Care Services	
Outpatient Care Centers	
Other Residential Care Facilities	
Residential Mental Retardation, Mental Health and Substance Abuse Facilities	
Medical and Diagnostic Laboratories	
METALS AND RELATED MANUFACTURING	
Machine Shops: Turned Product, and Screw, Nut, and Bolt Manufacturing	
Cutlery and Handtool Manufacturing	
MINING	
Coal Mining	
Nonmetallic Mineral Mining and Quarrying	
Metal Ore Mining	

<b>Existing Clusters, Industry List: Virginia Coalfield (cont.)</b>	
NONMETALLIC MINERALS & RELATED PRODUCTS	
Cement and Concrete Product Manufacturing	
Lime and Gypsum Product Manufacturing	
Petroleum and Coal Products Manufacturing	
Other Chemical Product and Preparation Manufacturing	
Rubber Product Manufacturing	
WOOD PRODUCT & FURNITURE MANUFACTURING	
Other Furniture Related Product Manufacturing	
Household and Institutional Furniture and Kitchen Cabinet Manufacturing	
Office Furniture (including Fixtures) Manufacturing	
<b>Emerging Clusters, Industry List: Virginia Coalfield</b>	
FINANCE AND INSURANCE	
Agencies, Brokerages, and Other Insurance Related Activities	
Nondepositary Credit Intermediation	
Securities and Commodity Contracts Intermediation and Brokerage	
Lessors of Nonfinancial Intangible Assets (except Copyrighted Works)	
Other Financial Investment Activities	
INFORMATION TECHNOLOGY AND PROFESSIONAL SERVICES	
Architectural, Engineering, and Related Services	
Other Professional, Scientific, and Technical Services	
Data Processing, Hosting, and Related Services	
Computer Systems Design and Related Services	
TEXTILES & APPAREL	
Cut and Sew Apparel Manufacturing	
Textile and Fabric Finishing and Fabric Coating Mills	
Other Textile Product Mills	

### Top 25 Skills-Based Industry Targets for Virginia Coalfield's Displaced Workers

The table below displays the top 25 skill-based industry recruitment targets for Virginia Coalfield, based on a comparison of the skills inherent to the region's displaced workers, and the skill requirements of individual industries.

Rank	Industry Title
1	Florists
2	Travel Arrangement and Reservation Services
3	Wholesale Electronic Markets and Agents and Brokers
4	Business Support Services
5	Community Care Facilities for the Elderly
6	Other Residential Care Facilities
7	Residential Mental Retardation, Mental Health and Substance Abuse Facilities
8	Paper and Paper Product Merchant Wholesalers
9	Wireless Telecommunications Carriers (except Satellite)
10	Nursing Care Facilities
11	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers
12	Beer, Wine, and Distilled Alcoholic Beverage Merchant Wholesalers
13	Individual and Family Services
14	Furniture and Home Furnishing Merchant Wholesalers
15	Facilities Support Services
16	Vocational Rehabilitation Services
17	Personal Care Services
18	Apparel, Piece Goods, and Notions Merchant Wholesalers
19	Electronic Shopping and Mail-Order Houses
20	Newspaper, Periodical, Book, and Directory Publishers
21	Electrical and Electronic Goods Merchant Wholesalers
22	Miscellaneous Nondurable Goods Merchant Wholesalers
23	Automotive Parts, Accessories, and Tire Stores
24	Florists
25	Travel Arrangement and Reservation Services

A total of 295 industries were ranked.

**Virginia's aCorridor Existing Industry Clusters**  
 (ranked by 2004 employment)

**HEALTH CARE**  
**AUTOMOTIVE MANUFACTURING\***  
**DISTRIBUTION & WAREHOUSING**  
**WOOD PRODUCT MANUFACTURING**  
**FOOD PROCESSING\***  
**COMMUNICATION & ENTERTAINMENT**  
**AGRICULTURE, FORESTRY, AND FISHING\***

Top 25 Occupations for Existing Industry Clusters	Estimated Employment, 2004q4	Top 25 Occupations for Emerging Industry Clusters	Estimated Employment, 2004q4
Nursing Aides, Orderlies, and Attendants	1,027	Team Assemblers	630
Team Assemblers	995	Sewing Machine Operators	327
Registered Nurses	985	Inspectors, Testers, Sorters, Samplers, and Weighers	232
Truck Drivers, Heavy and Tractor-Trailer	868	Customer Service Representatives	207
Laborers and Freight, Stock, and Material Movers, Hand	535	Welders, Cutters, Solderers, and Brazers	197
Licensed Practical and Licensed Vocational Nurses	425	First-Line Supervisors/Managers of Production and Operating Workers	180
Office Clerks, General	419	Tellers	171
Weavers, Cutters, Solderers, and Brazers	383	Assemblers and Fabricators, All Other	163
Inspectors, Testers, Sorters, Samplers, and Weighers	340	Accountants and Auditors	162
Sewing Machine Operators	327	Office Clerks, General	153
Industrial Truck and Tractor Operators	320	Maintenance and Repair Workers, General	148
Assemblers and Fabricators, All Other	298	Molding, Coremaking, and Casting Machine Setters, Operators, Tenders, Metal & Plastic	145
Maintenance and Repair Workers, General	297	Bookkeeping, Accounting, and Auditing Clerks	136
Customer Service Representatives	293	Shipping, Receiving, and Traffic Clerks	120
Home Health Aides	285	First-Line Supervisors/Managers of Office & Administrative Workers	118
General and Operations Managers	265	Loan Officers	117
Bookkeeping, Accounting, and Auditing Clerks	257	Industrial Truck and Tractor Operators	115
First-Line Supervisors/Managers of Production and Operating Workers	254	Extruding and Drawing Machine Setters, Operators, and Tenders, Metal & Plastic	113
Maids and Housekeeping Cleaners	223	General and Operations Managers	104
Truck Drivers, Light or Delivery Services	222	Cutting, Punching, Press Machine Setters, Operators, and Tenders, Metal & Plastic	99
Accountants and Auditors	204	Electrical and Electronic Equipment Assemblers	94
First-Line Supervisors/Managers of Office and Administrative	202	Moldings, Coremaking, and Casting Machine Setters, Operators, Tenders, Metal & Plastic	94
Shipping, Receiving, and Traffic Clerks	181	Tellers	87
		Laborers and Freight, Stock, and Material Movers, Hand	82
		Insurance Sales Agents	75
		Helpers--Production Workers	75

\* These clusters have low growth potential and therefore would not be considered as “target” clusters, although individual industries may have good growth potential.

Existing Clusters, Industry List: Virginia's aCorridor		Existing Clusters, Industry List: Virginia's aCorridor (cont.)
AGRICULTURE, FORESTRY, AND FISHING		FOOD PROCESSING (continued)
Cattle Ranching and Farming		Dairy Product Manufacturing
Greenhouse, Nursery, and Floriculture Production		Bakeries and Tortilla Manufacturing
Fruit and Tree Nut Farming		Sugar and Confectionery Product Manufacturing
Support Activities for Crop Production		Animal Slaughtering and Processing
Support Activities for Animal Production		HEALTH CARE
Other Crop Farming		General Medical and Surgical Hospitals
Support Activities for Forestry		Nursing Care Facilities
AUTOMOTIVE MANUFACTURING		Community Care Facilities for the Elderly
Motor Vehicle Parts Manufacturing		Home Health Care Services
Architectural and Structural Metals Manufacturing		Other Ambulatory Health Care Services
Engine, Turbine, and Power Transmission Equipment Manufacturing		Residential Mental Retardation, Mental Health and Substance Abuse Facilities
COMMUNICATION & ENTERTAINMENT		Other Residential Care Facilities
Radio and Television Broadcasting		Outpatient Care Centers
Wired Telecommunications Carriers		Medical and Diagnostic Laboratories
Cable and Other Program Distribution		WOOD PRODUCT & FURNITURE MANUFACTURING
Wireless Telecommunications Carriers (except Satellite)		Other Wood Product Manufacturing
Telecommunications Resellers		Sawmills and Wood Preservation
DISTRIBUTION & WAREHOUSING		Veneer, Plywood, and Engineered Wood Product Manufacturing
General Freight Trucking		
Specialized Freight Trucking		
Warehousing and Storage		
Automotive Repair and Maintenance		
Automotive Equipment Rental and Leasing		
Support Activities for Road Transportation		
Taxi and Limousine Service		
Support Activities for Air Transportation		
Freight Transportation Arrangement		
Interurban and Rural Bus Transportation		
Scenic and Sightseeing Transportation Land		
FOOD PROCESSING		
Other Food Manufacturing		

Emerging Clusters, Industry List: Virginia's aCorridor	
CHEMICALS & MATERIALS	
Plastics Product Manufacturing	
Rubber Product Manufacturing	
Paint, Coating, and Adhesive Manufacturing	
Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing	
ELECTRONICS EQUIPMENT & INSTRUMENTS MANUFACTURING	
Aerospace Product and Parts Manufacturing	
Other Electrical Equipment and Component Manufacturing	
FINANCE AND INSURANCE	
Depository Credit Intermediation	
Agencies, Brokerages, and Other Insurance Related Activities	
Nondepository Credit Intermediation	
Securities and Commodity Contracts, Intermediation and Brokerage	
Activities Related to Credit Intermediation	
INFORMATION TECHNOLOGY AND PROFESSIONAL SERVICES	
Accounting, Tax Preparation, Bookkeeping, and Payroll Services	
Computer Systems Design and Related Services	
Other Professional, Scientific, and Technical Services	
Scientific Research and Development Services	
Data Processing, Hosting, and Related Services	
MEDICAL RELATED PRODUCTS MANUFACTURING	
Other Miscellaneous Manufacturing	
Medical Equipment and Supplies Manufacturing	
METALS AND RELATED MANUFACTURING	
Electrical Equipment Manufacturing	
Other General Purpose Machinery Manufacturing	
Other Fabricated Metal Product Manufacturing	
Spring and Wire Product Manufacturing	
Metalworking Machinery Manufacturing	
Industrial Machinery Manufacturing	
Coating, Engraving, Heat Treating, and Allied Activities	
Iron and Steel Mills and Ferroalloy Manufacturing	

### Top 25 Skills-Based Industry Targets for Virginia's aCorridor's Displaced Workers

The table below displays the top 25 skill-based industry recruitment targets for Virginia's aCorridor, based on a comparison of the skills inherent to the region's displaced workers, and the skill requirements of individual industries.

Rank	Industry Title
1	Grocery and Related Product Wholesalers
2	Bakeries and Tortilla Manufacturing
3	Petroleum and Petroleum Products Merchant Wholesalers
4	Lawn and Garden Equipment and Supplies Stores
5	Other Support Activities for Transportation
6	Employment Services
7	Miscellaneous Nondurable Goods Merchant Wholesalers
8	Direct Selling Establishments
9	Traveler Accommodation
10	Miscellaneous Durable Goods Merchant Wholesalers
11	Other Furniture Related Product Manufacturing
12	Amusement Parks and Arcades
13	Other Amusement and Recreation Industries
14	Seafood Product Preparation and Packaging
15	Warehousing and Storage
16	Lumber and Other Construction Materials Merchant Wholesalers
17	Rooming and Boarding Houses
18	Automotive Parts, Accessories, and Tire Stores
19	Clay Product and Refractory Manufacturing
20	Other Support Services
21	Beer, Wine, and Distilled Alcoholic Beverage Merchant Wholesalers
22	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers
23	Other Personal Services
24	Sugar and Confectionery Product Manufacturing
25	Glass and Glass Product Manufacturing

A total of 295 industries were ranked.

**New River Valley Existing Industry Clusters**  
 (ranked by 2004 employment)

**HEALTH CARE**  
**INFORMATION TECHNOLOGY AND PROFESSIONAL SERVICES**  
**METALS AND RELATED MANUFACTURING**  
**TEXTILES & APPAREL\***  
**AGRICULTURE, FORESTRY, AND FISHING\***

Top 25 Occupations for Existing Industry Clusters	Estimated Employment, 2004q4
Team Assemblers	940
Registered Nurses	700
Welders, Cutters, Solderers, and Brazers	593
Nursing Aides, Orderlies, and Attendants	544
Assemblers and Fabricators, All Other	494
Inspectors, Testers, Sorters, Samplers, and Weighers	320
Licensed Practical and Licensed Vocational Nurses	227
Office Clerks, General	225
Maintenance and Repair Workers, General	201
Industrial Truck and Tractor Operators	186
Personal and Home Care Aides	175
Customer Service Representatives	153
General and Operations Managers	150
Bookkeeping, Accounting, and Auditing Clerks	144
Painters, Transportation Equipment	133
Home Health Aides	131
Maids and Housekeeping Cleaners	127
Molding, Coremaking, and Casting Machine Setters, Operators, Tenders, Metal & Plastic	126
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	124
Farmworkers and Laborers, Crop, Nursery, and Greenhouse	121
Tellers	119
Electricians	110
Child, Family, and School Social Workers	107
Cutting, Punching, and Press Machine Setters, Operators, and First-Line Supervisors/Managers of Office and Administrative	106
First-Line Supervisors/Managers of Office and Administrative	101

\* These clusters have low growth potential and therefore would not be considered as “target” clusters, although individual industries may have good growth potential.

**New River Valley Emerging Industry Clusters**  
 (ranked by 2004 employment)

**AUTOMOTIVE MANUFACTURING\***  
**FINANCE AND INSURANCE**  
**WOOD PRODUCT & FURNITURE MANUFACTURING**  
**FOOD PROCESSING\***  
**PRINTING & PAPER PRODUCTS MANUFACTURING\***  
**COMMUNICATION & ENTERTAINMENT**

Top 25 Occupations for Emerging Industry Clusters	Estimated Employment, 2004q4
Team Assemblers	918
Welders, Cutters, Solderers, and Brazers	576
Assemblers and Fabricators, All Other	486
Inspectors, Testers, Sorters, Samplers, and Weighers	301
Industrial Truck and Tractor Operators	179
Maintenance and Repair Workers, General	160
Customer Service Representatives	136
Painters, Transportation Equipment	133
Molding, Coremaking, and Casting Machine Setters, Operators, Tenders, Metal & Plastic	126
Tellers	119
Electricians	105
Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal & Plastic	96
Bookkeeping, Accounting, and Auditing Clerks	92
General and Operations Managers	90
Shipping, Receiving, and Traffic Clerks	90
Industrial Engineers	89
Industrial Machinery Mechanics	86
First-Line Supervisors/Managers of Mechanics, Installers, and Repairers	82
Loan Officers	82
Electrical and Electronic Equipment Assemblers	82
Carpenters	76
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	76
Installation, Maintenance, and Repair Workers, All Other	75
Office Clerks, General	69
Insurance, Sales Agents	69

<b>Emerging Clusters, Industry List: New River Valley</b>	
AUTOMOTIVE MANUFACTURING	
Motor Vehicle Manufacturing	
Motor Vehicle Parts Manufacturing	
Electric Lighting Equipment Manufacturing	
Spectator Sports	
Independent Artists, Writers, and Performers	
FINANCE AND INSURANCE	
Depository Credit Intermediation	
Agencies, Brokerages, and Other Insurance Related Activities	
Insurance Carriers	
Securities and Commodity Contracts Intermediation and Brokerage	
Activities Related to Credit Intermediation	
Insurance and Employee Benefit Funds	
FOOD PROCESSING	
Animal Food Manufacturing	
Bakeries and Tortilla Manufacturing	
PRINTING & PAPER PRODUCTS MANUFACTURING	
Lime and Gypsum Product Manufacturing	
Printing and Related Support Activities	
WOOD PRODUCT & FURNITURE MANUFACTURING	
Other Wood Product Manufacturing	
Veneer, Plywood, and Engineered Wood Product Manufacturing	
INFORMATION TECHNOLOGY AND PROFESSIONAL SERVICES	
Software Publishers	
Internet Service Providers and Web Search Portals	
Architectural and Structural Metals Manufacturing	
Spring and Wire Product Manufacturing	
TEXTILES & APPAREL	
Textile and Fabric Finishing and Fabric Coating Mills	
Apparel Knitting Mills	
Other Textile Product Mills	

<b>Existing Clusters, Industry List: New River Valley</b>	
AGRICULTURE, FORESTRY, AND FISHING	
Greenhouse, Nursery, and Floriculture Production	
Cattle Ranching and Farming	
Logging	
Support Activities for Forestry	
Forest Nurseries and Gathering of Forest Products	
Support Activities for Animal Production	
Support Activities for Crop Production	
HEALTH CARE	
General Medical and Surgical Hospitals	
Community Care Facilities for the Elderly	
Nursing Care Facilities	
Individual and Family Services	
Home Health Care Services	
Vocational Rehabilitation Services	
Other Ambulatory Health Care Services	
Psychiatric and Substance Abuse Hospitals	
Other Residential Care Facilities	
Outpatient Care Centers	
Community Food and Housing, and Emergency and Other Relief Services	
Residential Mental Retardation, Mental Health and Substance Abuse Facilities	
INFORMATION TECHNOLOGY AND PROFESSIONAL SERVICES	
Software Publishers	
Internet Service Providers and Web Search Portals	
Architectural and Structural Metals Manufacturing	
Spring and Wire Product Manufacturing	
TEXTILES & APPAREL	
Textile and Fabric Finishing and Fabric Coating Mills	
Apparel Knitting Mills	
Other Textile Product Mills	

## **Top 25 Skills-Based Industry Targets for New River Valley's Displaced Workers**

The table below displays the top 25 skill-based industry recruitment targets for New River Valley, based on a comparison of the skills inherent to the region's displaced workers, and the skill requirements of individual industries.

<b>Rank</b>	<b>Industry Title</b>
1	Animal Slaughtering and Processing
2	Services to Buildings and Dwellings
3	Highway, Street, and Bridge Construction
4	Waste Collection
5	General Freight Trucking
6	Specialized Freight Trucking
7	Support Activities for Crop Production
8	Cut and Sew Apparel Manufacturing
9	Couriers
10	Other Specialty Trade Contractors
11	Apparel Accessories and Other Apparel Manufacturing
12	Logging
13	School and Employee Bus Transportation
14	Support Activities for Animal Production
15	Household and Institutional Furniture and Kitchen Cabinet Manufacturing
16	Utility System Construction
17	Cement and Concrete Product Manufacturing
18	Other Heavy and Civil Engineering Construction
19	Support Activities for Road Transportation
20	Remediation and Other Waste Management Services
21	Drycleaning and Laundry Services
22	Sawmills and Wood Preservation
23	Waste Treatment and Disposal
24	Footwear Manufacturing
25	Other Textile Product Mills

A total of 295 industries were ranked.

**Roanoke Valley Existing Industry Clusters**  
 (ranked by 2004 employment)

HEALTH CARE  
 COMMUNICATION & ENTERTAINMENT  
 MACHINERY & EQUIPMENT MANUFACTURING  
 FOOD PROCESSING\*  
 ELECTRONICS EQUIPMENT & INSTRUMENTS MANUFACTURING  
 MINING\*

Top 25 Occupations for Existing Industry Clusters	Estimated Employment, 2004q4
Registered Nurses	3,084
Nursing Aides, Orderlies, and Attendants	2,006
Office Clerks, General	1,019
Licensed Practical and Licensed Vocational Nurses	931
Team Assemblers	763
Accountants and Auditors	752
Customer Service Representatives	559
Bookkeeping, Accounting, and Auditing Clerks	558
Home Health Aides	541
Maids and Housekeeping Cleaners	492
Lawyers	470
First-Line Supervisors/Managers of Office and Administrative Secretaries, Except Legal, Medical, and Executive	460
Loan Officers	460
General and Operations Managers	449
Tellers	422
Woodworking Machine Setters, Operators, and Tenders, Except Sawing	413
Maintenance and Repair Workers, General	370
Receptionists and Information Clerks	329
First-Line Supervisors/Managers of Production and Operating	310
Loan Officers	299
Sewing Machine Operators	281
Woodworking Machine Setters, Operators, and Tenders, Except Sawing	276
Industrial Truck and Tractor Operators	276
Paralegals and Legal Assistants	230
First-Line Supervisors/Managers of Production and Operating	226
Tax Preparers	222
Sawing Machine Setters, Operators, and Tenders, Wood	216
Insurance Sales Agents	208
Inspectors, Testers, Sorters, Samplers, and Weighers	201
Carpenters	195
Legal Secretaries	179
Executive Secretaries and Administrative Assistants	159
Receptionists and Information Clerks	153

**Roanoke Valley Emerging Industry Clusters**  
 (ranked by 2004 employment)

INFORMATION TECHNOLOGY AND PROFESSIONAL SERVICES  
 WOOD PRODUCT & FURNITURE MANUFACTURING  
 FINANCE AND INSURANCE  
 CHEMICALS & MATERIALS\*  
 AUTOMOTIVE MANUFACTURING\*  
 TEXTILES & APPAREL\*  
 AGRICULTURE, FORESTRY, AND FISHING\*

Top 25 Occupations for Emerging Industry Clusters	Estimated Employment, 2004q4
Accountants and Auditors	676
Team Assemblers	656
Office Clerks, General	486
Lawyers	470
Customer Service Representatives	428
Tellers	413
Bookkeeping, Accounting, and Auditing Clerks	405
Woodworking Machine Setters, Operators, and Tenders, Except Sawing	370
Laborers and Freight, Stock, and Material Movers, Hand	332
First-Line Supervisors/Managers of Office and Administrative	303
Loan Officers	281
Sewing Machine Operators	276
General and Operations Managers	236
Secretaries, Except Legal, Medical, and Executive	234
Industrial Truck and Tractor Operators	230
Paralegals and Legal Assistants	226
First-Line Supervisors/Managers of Production and Operating	222
Tax Preparers	216
Sawing Machine Setters, Operators, and Tenders, Wood	208
Insurance Sales Agents	201
Inspectors, Testers, Sorters, Samplers, and Weighers	201
Carpenters	195
Legal Secretaries	179
Executive Secretaries and Administrative Assistants	159
Receptionists and Information Clerks	153

\* These clusters have low growth potential and therefore would not be considered as “target” clusters, although individual industries may have good growth potential.

<b>Existing Clusters, Industry List: Roanoke Valley (cont.)</b>	
MACHINERY & EQUIPMENT MANUFACTURING	MACHINERY & EQUIPMENT MANUFACTURING (continued)
Metalworking Machinery Manufacturing	Commercial Land and Service Industry Machinery Manufacturing
Advertising and Related Services	Other General Purpose Machinery Manufacturing
Consumer Goods, Rental	Manufacturing and Reproducing Magnetic and Optical Media
General Rental Centers	MINING
Commercial and Industrial Machinery and Equipment Rental and Leasing	Nonmetallic Mineral Mining and Quarrying
Data Processing, Hosting, and Related Services	Support Activities for Mining

<b>Existing Clusters, Industry List: Roanoke Valley</b>
COMMUNICATION & ENTERTAINMENT
Newspaper, Periodical, Book, and Directory Publishers
Radio and Television Broadcasting
Advertising and Related Services
Consumer Goods, Rental
General Rental Centers
Commercial and Industrial Machinery and Equipment Rental and Leasing
Data Processing, Hosting, and Related Services
Cable and Other Subscription Programming
ELECTRONICS EQUIPMENT & INSTRUMENTS MANUFACTURING
Other Electrical Equipment and Component Manufacturing
Electric Lighting Equipment Manufacturing
Household Appliance Manufacturing
FOOD PROCESSING
Animal Slaughtering and Processing
Bakeries and Tortilla Manufacturing
Dairy Product Manufacturing
Grain and Oilseed Milling
Sugar and Confectionery Product Manufacturing
HEALTH CARE
General Medical and Surgical Hospitals
Nursing Care Facilities
Community Care Facilities for the Elderly
Home Health Care Services
Other Ambulatory Health Care Services
Other Residential Care Facilities
Outpatient Care Centers
Medical and Diagnostic Laboratories
Residential Mental Retardation, Mental Health and Substance Abuse Facilities
Psychiatric and Substance Abuse Hospitals
MACHINERY & EQUIPMENT MANUFACTURING
Engine, Turbine, and Power Transmission Equipment Manufacturing

<b>Emerging Clusters, Industry List: Roanoke Valley</b>	
AGRICULTURE, FORESTRY, AND FISHING	
Logging	
Support Activities for Forestry	
Support Activities for Animal Production	
Fruit and Tree Nut Farming	
Vegetable and Melon Farming	
AUTOMOTIVE MANUFACTURING	
Motor Vehicle Parts Manufacturing	
Motor Vehicle Body and Trailer Manufacturing	
CHEMICALS & MATERIALS	
Rubber Product Manufacturing	
Soap, Cleaning Compound, and Toilet Preparation Manufacturing	
Other Chemical Product and Preparation Manufacturing	
Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing	
FINANCE AND INSURANCE	
Depository Credit Intermediation	
Agencies, Brokerages, and Other Insurance Related Activities	
Nondepository Credit Intermediation	
Lessors of Nonfinancial Intangible Assets (except Copyrighted Works)	
Insurance and Employee Benefit Funds	
INFORMATION TECHNOLOGY AND PROFESSIONAL SERVICES	
Accounting, Tax Preparation, Bookkeeping, and Payroll Services	
Legal Services	
Architectural, Engineering, and Related Services	
Other Professional, Scientific, and Technical Services	
TEXTILES & APPAREL	
Cut and Sew Apparel Manufacturing	
Other Textile Product Mills	
Apparel Accessories and Other Apparel Manufacturing	

### **Top 25 Skills-Based Industry Targets for Roanoke Valley's Displaced Workers**

The table below displays the top 25 skill-based industry recruitment targets for the Roanoke Valley, based on a comparison of the skills inherent to the region's displaced workers, and the skill requirements of individual industries.

Rank	Industry Title
1	Grocery and Related Product Wholesalers
2	Miscellaneous Nondurable Goods Merchant Wholesalers
3	Beer, Wine, and Distilled Alcoholic Beverage Merchant Wholesalers
4	Petroleum and Petroleum Products Merchant Wholesalers
5	Miscellaneous Durable Goods Merchant Wholesalers
6	Automotive Parts, Accessories, and Tire Stores
7	Lumber and Other Construction Materials Merchant Wholesalers
8	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers
9	Employment Services
10	Metal and Mineral (except Petroleum) Merchant Wholesalers
11	Direct Selling Establishments
12	Other Furniture-Related Product Manufacturing
13	Furniture and Home Furnishing Merchant Wholesalers
14	Chemical and Allied Products Merchant Wholesalers
15	Vocational Rehabilitation Services
16	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers
17	Apparel, Piece Goods, and Notions Merchant Wholesalers
18	Lawn and Garden Equipment and Supplies Stores
19	Other Support Activities for Transportation
20	Bakeries and Tortilla Manufacturing
21	Other Support Services
22	Warehousing and Storage
23	Newspaper, Periodical, Book, and Directory Publishers
24	Paper and Paper Product Merchant Wholesalers
25	Other Amusement and Recreation Industries

A total of 295 industries were ranked.

**Shenandoah Valley Existing Industry Clusters**  
 (ranked by 2004 employment)

FOOD PROCESSING\*  
 HEALTH CARE  
 DISTRIBUTION & WAREHOUSING  
 CHEMICALS & MATERIALS\*  
 INFORMATION TECHNOLOGY AND PROFESSIONAL SERVICES  
 METALS AND RELATED MANUFACTURING  
 WOOD PRODUCT MANUFACTURING  
 AGRICULTURE, FORESTRY, AND FISHING\*  
 ELECTRONICS EQUIPMENT & INSTRUMENTS MANUFACTURING

**Shenandoah Valley Emerging Industry Clusters**  
 (ranked by 2004 employment)

**FINANCE AND INSURANCE**

\* These clusters have low growth potential and therefore would not be considered as “target” clusters, although individual industries may have good growth potential.

<b>Top 25 Occupations for Existing Industry Clusters</b>	<b>Estimated Employment, 2004q4</b>
Laborers and Freight, Stock, and Material Movers, Hand	1,732
Registered Nurses	1,728
Truck Drivers, Heavy and Tractor-Trailer	1,655
Nursing Aides, Orderlies, and Attendants	1,326
Meat, Poultry, and Fish Cutters and Trimmers	979
Office Clerks, General	645
Industrial Truck and Tractor Operators	620
Sewing Machine Operators	618
Licensed Practical and Licensed Vocational Nurses	594
First-Line Supervisors/Managers of Production and Operating Workers	532
Slaughterers and Meat Packers	511
Packaging and Filling Machine Operators and Tenders	498
Truck Drivers, Light or Delivery Services	420
Team Assemblers	409
Maintenance and Repair Workers, General	405
Packers and Packagers, Hand	376
Stock Clerks and Order Fillers	370
Home Health Aides	365
General and Operations Managers	363
Helpers--Production Workers	344
Inspectors, Testers, Sorters, Samplers, and Weighers	334
Farmworkers and Laborers, Crop, Nursery, and Greenhouse	318
Maids and Housekeeping Cleaners	310
Bookkeeping, Accounting, and Auditing Clerks	283
Food Batchmakers	234

<b>Top 25 Occupations for Emerging Industry Clusters</b>	<b>Estimated Employment, 2004q4</b>
Insurance Sales Agents	47
Securities, Commodities, and Financial Services Sales Agents	42
Customer Service Representatives	40
Office Clerks, General	28
Personal Financial Advisors	21
Claims Adjusters, Examiners, and Investigators	15
First-Line Supervisors/Managers of Office and Administrative Workers	14
Executive Secretaries and Administrative Assistants	14
Brokerage Clerks	12
Insurance Underwriters	12
Bookkeeping, Accounting, and Auditing Clerks	12
Tellers	10
Loan Officers	8
Financial Analysts	8
Secretaries, Except Legal, Medical, and Executive	8
Accountants and Auditors	8
Business Operations Specialists, All Other	8
General and Operations Managers	7
Financial Managers	7
Computer Systems Analysts	5
Receptionists and Information Clerks	4
Loan Interviewers and Clerks	4
First-Line Supervisors/Managers of Non-Retail Sales Workers	4
Management Analysts	3
Chief Executives	3

<b>Existing Clusters, Industry List: Shenandoah Valley</b>	
AGRICULTURE, FORESTRY, AND FISHING	
Cattle Ranching and Farming	
Greenhouse, Nursery, and Floriculture Production	
Poultry and Egg Production	
Logging	
Fruit and Tree Nut Farming	
Support Activities for Crop Production	
Other Animal Production	
Other Crop Farming	
Support Activities for Animal Production	
Support Activities for Forestry	
Animal Aquaculture	
CHEMICALS & MATERIALS	
Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing	
Petroleum and Coal Products Manufacturing	
Other Chemical Product and Preparation Manufacturing	
Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing	
Paint, Coating, and Adhesive Manufacturing	
DISTRIBUTION & WAREHOUSING	
Warehousing and Storage	
General Freight Trucking	
Automotive Repair and Maintenance	
Specialized Freight Trucking	
Automotive Equipment Rental and Leasing	
Other Support Activities for Transportation	
Support Activities for Road Transportation	
Freight Transportation Arrangement	
Support Activities for Air Transportation	
Scenic and Sightseeing Transportation, Land	
ELECTRONICS EQUIPMENT & INSTRUMENTS MANUFACTURING	
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	
Communications Equipment Manufacturing	
Semiconductor and Other Electronic Component Manufacturing	

<b>Existing Clusters, Industry List: Shenandoah Valley (cont.)</b>	
MACHINERY & EQUIPMENT MANUFACTURING (continued)	
Metalworking Machinery Manufacturing	
Commercial and Service Industry Machinery Manufacturing	
Other General Purpose Machinery Manufacturing	
Manufacturing and Reproducing Magnetic and Optical Media	
MINING	
Nonmetallic Mineral Mining and Quarrying	
Support Activities for Mining	
FOOD PROCESSING	
Animal Slaughtering and Processing	
Animal Food Manufacturing	
Other Leather and Allied Product Manufacturing	
HEALTH CARE	
General Medical and Surgical Hospitals	
Community Care Facilities for the Elderly	
Nursing Care Facilities	
Home Health Care Services	
Outpatient Care Centers	
Residential Mental Retardation, Mental Health and Substance Abuse Facilities	
Medical and Diagnostic Laboratories	
Other Residential Care Facilities	
Other Ambulatory Health Care Services	
INFORMATION TECHNOLOGY AND PROFESSIONAL SERVICES	
Data Processing, Hosting, and Related Services	
METALS AND RELATED MANUFACTURING	
Forging and Stamping	
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	
Other Fabricated Metal Product Manufacturing	
Engine, Turbine, and Power Transmission Equipment Manufacturing	
Foundries	
Industrial Machinery Manufacturing	
Metalworking Machinery Manufacturing	
Other General Purpose Machinery Manufacturing	

<b>Emerging Clusters, Industry List: Shenandoah Valley</b>	
FINANCE AND INSURANCE	
Insurance Carriers	
Securities and Commodity Contracts Intermediation and Brokerage	
Other Financial Investment Activities	
Activities Related to Credit Intermediation	

<b>Existing Clusters, Industry List: Shenandoah Valley (cont.)</b>	
METALS AND RELATED MANUFACTURING (continued)	
Nonferrous Metal (except Aluminum) Production and Processing	
Ship and Boat Building	
Agriculture, Construction, and Mining Machinery Manufacturing	
TEXTILES & APPAREL	
Textile Furnishings Mills	
Fabric Mills	
Fiber, Yarn, and Thread Mills	
Cut and Sew Apparel Manufacturing	
Other Textile Product Mills	
Textile and Fabric Finishing and Fabric Coating Mills	
WOOD PRODUCT & FURNITURE MANUFACTURING	
Sawmills and Wood Preservation	
Household and Institutional Furniture and Kitchen Cabinet Manufacturing	
Other Wood Product Manufacturing	
Pulp, Paper, and Paperboard Mills	
Veneer, Plywood, and Engineered Wood Product Manufacturing	

## **Top 25 Skills-Based Industry Targets for Shenandoah Valley's Displaced Workers**

The table below displays the top 25 skill-based industry recruitment targets for the Shenandoah Valley, based on a comparison of the skills inherent to the region's displaced workers, and the skill requirements of individual industries.

Rank	Industry Title
1	Clay Product and Refractory Manufacturing
2	Dairy Product Manufacturing
3	Support Activities for Water Transportation
4	Textile Furnishings Mills
5	Animal Food Manufacturing
6	Fruit and Vegetable Preserving and Specialty Food Manufacturing
7	Nonmetallic Mineral Mining and Quarrying
8	Veneer, Plywood, and Engineered Wood Product Manufacturing
9	Other Nonmetallic Mineral Product Manufacturing
10	Lime and Gypsum Product Manufacturing
11	Tobacco Manufacturing
12	Other Wood Product Manufacturing
13	Leather and Hide Tanning and Finishing
14	Glass and Glass Product Manufacturing
15	Seafood Product Preparation and Packaging
16	Railroad Rolling Stock Manufacturing
17	Rubber Product Manufacturing
18	Boiler, Tank, and Shipping Container Manufacturing
19	Sawmills and Wood Preservation
20	Other Furniture Related Product Manufacturing
21	Support Activities for Rail Transportation
22	Textile and Fabric Finishing and Fabric Coating Mills
23	Footwear Manufacturing
24	Other Leather and Allied Product Manufacturing
25	Coal Mining

A total of 295 industries were ranked.

**Northern Shenandoah Valley Existing Industry Clusters**  
 (ranked by 2004 employment)

HEALTH CARE  
 FOOD PROCESSING\*  
 WOOD PRODUCT MANUFACTURING  
 DISTRIBUTION & WAREHOUSING  
 METALS AND RELATED MANUFACTURING  
 AUTOMOTIVE MANUFACTURING\*  
 TEXTILES & APPAREL\*

**AGRICULTURE, FORESTRY, AND FISHING\***  
**ELECTRONICS EQUIPMENT & INSTRUMENTS MANUFACTURING**

Top 25 Occupations for Existing Industry Clusters	Estimated Employment, 2004q4
Registered Nurses	1,270
Laborers and Freight, Stock, and Material Movers, Hand	980
Truck Drivers, Heavy and Tractor-Trailer	928
Nursing Aides, Orderlies, and Attendants	790
Office Clerks, General	496
Sewing Machine Operators	427
Industrial Truck and Tractor Operators	353
Licensed Practical and Licensed Vocational Nurses	346
Team Assemblers	341
Meat, Poultry, and Fish Cutters and Trimmers	314
General and Operations Managers	263
Bookkeeping, Accounting, and Auditing Clerks	256
Customer Service Representatives	241
Truck Drivers, Light or Delivery Services	239
First-Line Supervisors/Managers of Office and Administrative Tellers	235
Farmworkers and Laborers, Crop, Nursery, and Greenhouse	233
Maintenance and Repair Workers, General	229
Maids and Housekeeping Cleaners	226
Secretaries, Except Legal, Medical, and Executive	211
Farmworkers and Laborers, Crop, Nursery, and Greenhouse	203
Stock Clerks and Order Fillers	199
Accountants and Auditors	194
Inspectors, Testers, Samplers, and Weighers	191
Slaughterers and Meat Packers	171
	164

**Northern Shenandoah Valley Emerging Industry Clusters**  
 (ranked by 2004 employment)

**INFORMATION TECHNOLOGY AND PROFESSIONAL SERVICES**  
**FINANCE AND INSURANCE**  
**CHEMICALS & MATERIALS\***

\* These clusters have low growth potential and therefore would not be considered as “target” clusters, although individual industries may have good growth potential.

Top 25 Occupations for Emerging Industry Clusters	Estimated Employment, 2004q4
Tellers	233
Office Clerks, General	178
Customer Service Representatives	171
Loan Officers	159
Lawyers	156
Accountants and Auditors	141
First-Line Supervisors/Managers of Office and Administrative Bookkeeping, Accounting, and Auditing Clerks	129
Management Analysts	111
Loan Interviewers and Clerks	82
General and Operations Managers	80
Paralegals and Legal Assistants	77
Civil Engineers	76
Secretaries, Except Legal, Medical, and Executive	74
Electrical Engineers	69
Receptionists and Information Clerks	67
Computer Software Engineers, Applications	66
Executive Secretaries and Administrative Assistants	66
Computer Systems Analysts	63
Veterinary Assistants and Laboratory Animal Caretakers	61
Legal Secretaries	61
Bill and Account Collectors	59
Computer Software Engineers, Systems Software	57
Securities, Commodities, and Financial Services Sales Agents	54
Nonfarm Animal Caretakers	53
Inspectors, Testers, Samplers, and Weighers	50
Slaughterers and Meat Packers	50

<b>Existing Clusters, Industry List: Northern Shenandoah Valley</b>	
AGRICULTURE, FORESTRY, AND FISHING	
Fruit and Tree Nut Farming	
Poultry and Egg Production	
Support Activities for Animal Production	
Support Activities for Crop Production	
AUTOMOTIVE MANUFACTURING	
Motor Vehicle Body and Trailer Manufacturing	
Motor Vehicle Manufacturing	
DISTRIBUTION & WAREHOUSING	
Warehousing and Storage	
General Freight Trucking	
Specialized Freight Trucking	
Support Activities for Road Transportation	
Freight Transportation Arrangement	
Other Support Activities for Transportation	
Automotive Equipment Rental and Leasing	
Support Activities for Air Transportation	
Scenic and Sightseeing Transportation, Other	
ELECTRONICS EQUIPMENT & INSTRUMENTS MANUFACTURING	
Other Electrical Equipment and Component Manufacturing	
Computer and Peripheral Equipment Manufacturing	
Semiconductor and Other Electronic Component Manufacturing	
Communications Equipment Manufacturing	
FOOD PROCESSING	
Animal Slaughtering and Processing	
Fruit and Vegetable Preserving and Specialty Food Manufacturing	
Animal Food Manufacturing	
HEALTH CARE	
General Medical and Surgical Hospitals	
Community Care Facilities for the Elderly	
Nursing Care Facilities	
Residential Mental Retardation, Mental Health and Substance Abuse Facilities	
Other Residential Care Facilities	

<b>Existing Clusters, Industry List: Northern Shenandoah Valley (cont.)</b>	
METALS AND RELATED MANUFACTURING	
Architectural and Structural Metals Manufacturing	
Nonferrous Metal (except Aluminum) Production and Processing	
Metalworking Machinery Manufacturing	
Machine Shops; Turned Product, and Screw, Nut, and Bolt Manufacturing	
Boiler, Tank, and Shipping Container Manufacturing	
TEXTILES & APPAREL	
Cut and Sew Apparel Manufacturing	
WOOD PRODUCT & FURNITURE MANUFACTURING	
Other Wood Product Manufacturing	
Veneer, Plywood, and Engineered Wood Product Manufacturing	
Sawmills and Wood Preservation	
<b>Emerging Clusters, Industry List: Northern Shenandoah Valley</b>	
CHEMICALS & MATERIALS	
Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments	
Basic Chemical Manufacturing	
FINANCE AND INSURANCE	
Depository Credit Intermediation	
Nondepository Credit Intermediation	
Securities and Commodity Contracts Intermediation and Brokerage	
Other Financial Investment Activities	
INFORMATION TECHNOLOGY AND PROFESSIONAL SERVICES	
Architectural, Engineering, and Related Services	
Legal Services	
Other Professional, Scientific, and Technical Services	
Accounting, Tax Preparation, Bookkeeping, and Payroll Services	
Computer Systems Design and Related Services	
Management, Scientific, and Technical Consulting Services	

### Top 25 Skills-Based Industry Targets for Northern Shenandoah Valley's Displaced Workers

The table below displays the top 25 skill-based industry recruitment targets for Northern Shenandoah Valley, based on a comparison of the skills inherent to the region's displaced workers, and the skill requirements of individual industries.

Rank	Industry Title
1	Household and Institutional Furniture and Kitchen Cabinet Manufacturing
2	Farm Product Raw Material Merchant Wholesalers
3	Sawmills and Wood Preservation
4	Footwear Manufacturing
5	Leather and Hide Tanning and Finishing
6	Cement and Concrete Product Manufacturing
7	Nonmetallic Mineral Mining and Quarrying
8	Logging
9	Animal Slaughtering and Processing
10	Veneer, Plywood, and Engineered Wood Product Manufacturing
11	Other Furniture Related Product Manufacturing
12	Other Specialty Trade Contractors
13	Rubber Product Manufacturing
14	Coal Mining
15	Clay Product and Refractory Manufacturing
16	Other Wood Product Manufacturing
17	Support Activities for Water Transportation
18	Other Leather and Allied Product Manufacturing
19	Office Furniture (including Fixtures) Manufacturing
20	Apparel Accessories and Other Apparel Manufacturing
21	Cut and Sew Apparel Manufacturing
22	Support Activities for Animal Production
23	Seafood Product Preparation and Packaging
24	Highway, Street, and Bridge Construction
25	Other Heavy and Civil Engineering Construction

A total of 295 industries were ranked.

**Northern Virginia Existing Industry Clusters**  
(ranked by 2004 employment)

INFORMATION TECHNOLOGY AND PROFESSIONAL SERVICES  
COMMUNICATION, PUBLISHING AND BROADCASTING  
HEALTH CARE  
FINANCE AND INSURANCE  
ENTERTAINMENT  
MACHINERY & EQUIPMENT MANUFACTURING  
FOOD PROCESSING\*  
WOOD PRODUCT MANUFACTURING  
CHEMICALS & MATERIALS\*  
TEXTILES & APPAREL\*

Top 25 Occupations for Existing Industry Clusters	Estimated Employment, 2004q4
Computer Software Engineers, Applications	14,859
Computer Programmers	14,502
Computer Software Engineers, Systems Software	10,564
Computer Systems Analysts	10,473
Customer Service Representatives	10,360
Computer Support Specialists	10,274
Office Clerks, General	9,034
Registered Nurses	8,694
Management Analysts	8,073
Accountants and Auditors	7,753
General and Operations Managers	6,921
Network and Computer Systems Administrators	5,832
Nursing Aides, Orderlies, and Attendants	5,304
First-Line Supervisors/Managers of Office and Administrative Bookkeeping, Accounting, and Auditing Clerks	5,211
Executive Secretaries and Administrative Assistants	5,209
Computer and Information Systems Managers	4,790
Secretaries, Except Legal, Medical, and Executive	4,598
Business Operations Specialists, All Other Tellers	4,451
Receptionists and Information Clerks	4,161
Telecommunications Equipment Installers and Repairers, Except Line Installers	3,004
Loan Officers	2,946
Licensed Practical and Licensed Vocational Nurses	2,775
Electrical Engineers	2,765

**Northern Virginia Emerging Industry Clusters**  
(ranked by 2004 employment)

ELECTRONICS EQUIPMENT & INSTRUMENTS MANUFACTURING  
MEDICAL RELATED PRODUCTS MANUFACTURING\*  
AGRICULTURE, FORESTRY, AND FISHING\*

\* These clusters have low growth potential and therefore would not be considered as "target" clusters, although individual industries may have good growth potential.

Top 25 Occupations for Emerging Industry Clusters	Estimated Employment, 2004q4
Team Assemblers	492
Electrical and Electronic Equipment Assemblers	350
First-Line Supervisors/Managers of Production and Operating Inspectors, Testers, Sorters, Samplers, and Weighers	135
Electrical and Electronic Engineering Technicians	133
Engineers, All Other	128
Farmworkers and Laborers, Crop, Nursery, and Greenhouse General and Operations Managers	117
Electrical Engineers	115
Laborers and Freight, Stock, and Material Movers, Hand Dental Laboratory Technicians	105
Computer Software Engineers, Systems Software	92
Engineering Managers	82
Computer Software Engineers, Applications	80
Shipping, Receiving, and Traffic Clerks	72
Customer Service Representatives	71
Production, Planning, and Expediting Clerks	67
Customer Service Representatives	67
Office Clerks, General	65
Extruding and Drawing Machine Setters, Operators, and Tenders, Metal & Plastic	64
Machinists	62
Industrial Engineers	59
Maintenance and Repair Workers, General	59
Mechanical Engineers	59
Secretaries, Except Legal, Medical, and Executive	55
Sales Representatives, Wholesale and Manufacturing, Except Technical & Scientific Products	54

<b>Existing Clusters, Industry List: Northern Virginia (cont.)</b>
FINANCE AND INSURANCE (continued)
Securities and Commodity Contracts Intermediation and Brokerage
Insurance and Employee Benefit Funds
Other Investment Pools and Funds
Monetary Authorities - Central Bank
FOOD PROCESSING
Beverage Manufacturing
Fruit and Vegetable Preserving and Specialty Food Manufacturing
Other Food Manufacturing
Grain and Oilseed Milling
HEALTH CARE
General Medical and Surgical Hospitals
Nursing Care Facilities
Community Care Facilities for the Elderly
Outpatient Care Centers
Home Health Care Services
Medical and Diagnostic Laboratories
Residential Mental Retardation, Mental Health and Substance Abuse Facilities
Psychiatric and Substance Abuse Hospitals
Other Ambulatory Health Care Services
Other Residential Care Facilities
Specialty (except Psychiatric and Substance Abuse) Hospitals
INFORMATION TECHNOLOGY AND PROFESSIONAL SERVICES
Computer Systems Design and Related Services
Architectural, Engineering, and Related Services
Accounting, Tax Preparation, Bookkeeping, and Payroll Services
Scientific Research and Development Services
Data Processing, Hosting, and Related Services
Other Professional, Scientific, and Technical Services
Specialized Design Services
MACHINERY & EQUIPMENT MANUFACTURING
Aerospace Product and Parts Manufacturing

<b>Existing Clusters, Industry List: Northern Virginia</b>
CHEMICALS & MATERIALS
Plastics Product Manufacturing
Other Chemical Product and Preparation Manufacturing
Basic Chemical Manufacturing
Soap, Cleaning Compound, and Toilet Preparation Manufacturing
Converted Paper Product Manufacturing
Petroleum and Coal Products Manufacturing
Paint, Coating, and Adhesive Manufacturing
COMMUNICATION, PUBLISHING AND BROADCASTING
Wired Telecommunications Carriers
Internet Service Providers and Web Search Portals
Software Publishers
Radio and Television Broadcasting
Internet Publishing and Broadcasting
Cable and Other Program Distribution
Telecommunications Resellers
Cable and Other Subscription Programming
Wireless Telecommunications Carriers (except Satellite)
Other Information Services
Satellite Telecommunications
Other Telecommunications
ENTERTAINMENT
Motion Picture and Video Industries
Promoters of Performing Arts, Sports, and Similar Events
Spectator Sports
Agents and Managers for Artists, Athletes, Entertainers, and Other Public Figure
Independent Artists, Writers, and Performers
FINANCE AND INSURANCE
Nondepository Credit Intermediation
Depository Credit Intermediation
Insurance Carriers
Agencies, Brokerages, and Other Insurance Related Activities
Activities Related to Credit Intermediation
Other Financial Investment Activities

<b>Emerging Clusters, Industry List: Northern Virginia</b>	
AGRICULTURE, FORESTRY, AND FISHING	
Greenhouse, Nursery, and Floriculture Production	
Support Activities for Animal Production	
Vegetable and Melon Farming	
Support Activities for Forestry	
ELECTRONICS EQUIPMENT & INSTRUMENTS MANUFACTURING	
Communications Equipment Manufacturing	
Semiconductor and Other Electronic Component Manufacturing	
Audio and Video Equipment Manufacturing	
MEDICAL RELATED PRODUCTS MANUFACTURING	
Other Miscellaneous Manufacturing	
Medical Equipment and Supplies Manufacturing	

<b>Existing Clusters, Industry List: Northern Virginia (cont.)</b>	
MACHINERY & EQUIPMENT MANUFACTURING (continued)	
Other General Purpose Machinery Manufacturing	
Agriculture, Construction, and Mining Machinery Manufacturing	
Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing	
TEXTILES & APPAREL	
Textile Furnishings Mills	
Cut and Sew Apparel Manufacturing	
Textile and Fabric Finishing and Fabric Coating Mills	
Other Textile Product Mills	
Apparel Accessories and Other Apparel Manufacturing	
Other Leather and Allied Product Manufacturing	
WOOD PRODUCT & FURNITURE MANUFACTURING	
Other Wood Product Manufacturing	
Household and Institutional Furniture and Kitchen Cabinet Manufacturing	
Office Furniture (including Fixtures) Manufacturing	
Veneer, Plywood, and Engineered Wood Product Manufacturing	
Sawmills and Wood Preservation	
Other Furniture Related Product Manufacturing	

### Top 25 Skills-Based Industry Targets for Northern Virginia's Displaced Workers

The table below displays the top 25 skill-based industry recruitment targets for Northern Virginia, based on a comparison of the skills inherent to the region's displaced workers, and the skill requirements of individual industries.

Rank	Industry Title
1	Electrical and Electronic Goods Merchant Wholesalers
2	Other Motor Vehicle Dealers
3	Professional and Commercial Equipment and Supplies Merchant Wholesalers
4	Promoters of Performing Arts, Sports, and Similar Events
5	Machinery, Equipment, and Supplies Merchant Wholesalers
6	Chemical and Allied Products Merchant Wholesalers
7	Apparel, Piece Goods, and Notions Merchant Wholesalers
8	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers
9	Paper and Paper Product Merchant Wholesalers
10	Spectator Sports
11	Wholesale Electronic Markets and Agents and Brokers
12	Furniture and Home Furnishing Merchant Wholesalers
13	Gambling Industries
14	Drugs and Druggists' Sundries Merchant Wholesalers
15	Other Support Services
16	Consumer Goods Rental
17	Manufacturing and Reproducing Magnetic and Optical Media
18	Community Care Facilities for the Elderly
19	Telecommunications Resellers
20	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers
21	Miscellaneous Nondurable Goods Merchant Wholesalers
22	Cable and Other Subscription Programming
23	Freight Transportation Arrangement
24	State Government (OES designation)
25	Business Support Services

A total of 295 industries were ranked.

**Rappahannock Region Existing Industry Clusters**  
 (ranked by 2004 employment)

**HEALTH CARE**  
**AGRICULTURE, FORESTRY, AND FISHING\***  
**WOOD PRODUCT MANUFACTURING**  
**METALS AND RELATED MANUFACTURING**  
**ELECTRONICS EQUIPMENT & INSTRUMENTS MANUFACTURING**  
**MINING\***  
**TEXTILES & APPAREL\***

<b>Top 25 Occupations for Existing Industry Clusters</b>	<b>Estimated Employment, 2004q4</b>
Nursing Aides, Orderlies, and Attendants	558
Registered Nurses	504
Farmworkers and Laborers, Crop, Nursery, and Greenhouse	270
Team Assemblers	221
Licensed Practical and Licensed Vocational Nurses	216
Office Clerks, General	176
Woodworking Machine Setters, Operators, and Tenders, Except Sawing	148
Laborers and Freight, Stock, and Material Movers, Hand	147
Home Health Aides	135
Maids and Housekeeping Cleaners	126
General and Operations Managers	123
Maintenance and Repair Workers, General	119
First-Line Supervisors/Managers of Production and Operating	116
Accountants and Auditors	113
Nonfarm Animal Caretakers	113
Farm, Ranch, and Other Agricultural Managers	106
Inspectors, Testers, Sorters, Samplers, and Weighers	98
Bookkeeping, Accounting, and Auditing Clerks	98
Farmworkers, Farm and Ranch Animals	94
Computer Programmers	93
Customer Service Representatives	93
Cabinetmakers and Bench Carpenters	93
Industrial Truck and Tractor Operators	92
Secretaries, Except Legal, Medical, and Executive	88
Assemblers and Fabricators, All Other	84

**Rappahannock Region Emerging Industry Clusters**  
 (ranked by 2004 employment)

**INFORMATION TECHNOLOGY AND PROFESSIONAL SERVICES**  
**FOOD PROCESSING\***  
**FINANCE AND INSURANCE**  
**MEDICAL RELATED PRODUCTS MANUFACTURING\***

\* These clusters have low growth potential and therefore would not be considered as "target" clusters, although individual industries may have good growth potential.

<b>Top 25 Occupations for Emerging Industry Clusters</b>	<b>Estimated Employment, 2004q4</b>
Accountants and Auditors	92
Computer Programmers	91
Customer Service Representatives	63
Office Clerks, General	60
Computer Support Specialists	55
Veterinary Assistants and Laboratory Animal Caretakers	53
General and Operations Managers	52
Computer Systems Analysts	51
Nonfarm Animal Caretakers	44
Bookkeeping, Accounting, and Auditing Clerks	44
Receptionists and Information Clerks	42
Management Analysts	42
Network and Computer Systems Administrators	38
Veterinarians	35
Computer and Information Systems Managers	35
Packaging and Filling Machine Operators and Tenders	32
First-Line Supervisors/Managers of Office and Administrative	31
Executive Secretaries and Administrative Assistants	31
Secretaries, Except Legal, Medical, and Executive	29
Data Entry Keyers	28
Veterinary Technologists and Technicians	26
Inspectors, Testers, Sorters, Samplers, and Weighers	26
Photographers	25
Tax Preparers	25
Civil Engineers	23

<b>Existing Clusters, Industry List: Rappahannock Region</b>	
<b>AGRICULTURE, FORESTRY, AND FISHING</b>	
Cattle Ranching and Farming	
Other Animal Production	
Support Activities for Animal Production	
Support Activities for Forestry	
Support Activities for Crop Production	
Animal Aquaculture	
<b>ELECTRONICS EQUIPMENT &amp; INSTRUMENTS MANUFACTURING</b>	
Other Electrical Equipment and Component Manufacturing	
Aerospace Product and Parts Manufacturing	
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	
Communications Equipment Manufacturing	
<b>HEALTH CARE</b>	
General Medical and Surgical Hospitals	
Nursing Care Facilities	
Community Care Facilities for the Elderly	
Residential Mental Retardation, Mental Health and Substance Abuse Facilities	
Other Residential Care Facilities	
<b>METALS AND RELATED MANUFACTURING</b>	
Motor Vehicle Parts Manufacturing	
Cutlery and Handtool Manufacturing	
Cement and Concrete Product Manufacturing	
Machine Shops; Turned Product, and Screw, Nut, and Bolt Manufacturing	
Foundries	
Other Fabricated Metal Product Manufacturing	
Steel Product Manufacturing from Purchased Steel	
Coating, Engraving, Heat Treating, and Allied Activities	
Architectural and Structural Metals Manufacturing	
<b>MINING</b>	
Nonmetallic Mineral Mining and Quarrying	
Support Activities for Mining	
<b>Existing Clusters, Industry List: Rappahannock Region (cont.)</b>	
<b>TEXTILES &amp; APPAREL</b>	
Textile and Fabric Finishing and Fabric Coating Mills	
Cut and Sew Apparel Manufacturing	
Textile Furnishings Mills	
<b>WOOD PRODUCT &amp; FURNITURE MANUFACTURING</b>	
Household and Institutional Furniture and Kitchen Cabinet Manufacturing	
Sawmills and Wood Preservation	
Other Wood Product Manufacturing	
<b>Emerging Clusters, Industry List: Rappahannock Region</b>	
<b>FINANCE AND INSURANCE</b>	
Insurance Carriers	
Other Investment Pools and Funds	
<b>FOOD PROCESSING</b>	
Beverage Manufacturing	
Bakeries and Tortilla Manufacturing	
<b>INFORMATION TECHNOLOGY AND PROFESSIONAL SERVICES</b>	
Data Processing, Hosting, and Related Services	
Other Professional, Scientific, and Technical Services	
Architectural, Engineering, and Related Services	
Accounting, Tax Preparation, Bookkeeping, and Payroll Services	
Scientific Research and Development Services	
<b>MEDICAL RELATED PRODUCTS MANUFACTURING</b>	
Manufacturing and Reproducing Magnetic and Optical Media	
Other Miscellaneous Manufacturing	
Medical Equipment and Supplies Manufacturing	

### Top 25 Skills-Based Industry Targets for Rappahannock Region's Displaced Workers

The table below displays the top 25 skill-based industry recruitment targets for the Rappahannock Region, based on a comparison of the skills inherent to the region's displaced workers, and the skill requirements of individual industries.

Rank	Industry Title
1	Computer Systems Design and Related Services
2	Software Publishers
3	Data Processing, Hosting, and Related Services
4	Internet Service Providers and Web Search Portals
5	Internet Publishing and Broadcasting
6	Computer and Peripheral Equipment Manufacturing
7	Manufacturing and Reproducing Magnetic and Optical Media
8	Scientific Research and Development Services
9	Other Telecommunications
10	Professional and Commercial Equipment and Supplies Merchant Wholesalers
11	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing
12	Communications Equipment Manufacturing
13	Securities and Commodity Exchanges
14	Monetary Authorities - Central Bank
15	Federal Executive Branch and United States Postal Service (OES designation)
16	Semiconductor and Other Electronic Component Manufacturing
17	Commercial and Service Industry Machinery Manufacturing
18	Aerospace Product and Parts Manufacturing
19	Management of Companies and Enterprises
20	Management, Scientific, and Technical Consulting Services
21	Pharmaceutical and Medicine Manufacturing
22	Electric Power Generation, Transmission and Distribution
23	Telecommunications, Resellers
24	Basic Chemical Manufacturing
25	Satellite Telecommunications

A total of 295 industries were ranked.

**Greater Charlottesville Existing Industry Clusters**  
(ranked by 2004 employment)

INFORMATION TECHNOLOGY AND PROFESSIONAL SERVICES  
HEALTH CARE  
ELECTRONICS EQUIPMENT & INSTRUMENTS MANUFACTURING  
COMMUNICATION & ENTERTAINMENT  
WOOD PRODUCT MANUFACTURING  
AGRICULTURE, FORESTRY, AND FISHING\*  
TEXTILES & APPAREL\*

**Greater Charlottesville Emerging Industry Clusters**  
(ranked by 2004 employment)

FINANCE AND INSURANCE  
CHEMICALS & MATERIALS\*  
METALS AND RELATED MANUFACTURING

\* These clusters have low growth potential and therefore would not be considered as "target" clusters, although individual industries may have good growth potential.

<b>Estimated Employment, 2004q4</b>	<b>Top 25 Occupations for Emerging Industry Clusters</b>	<b>Estimated Employment, 2004q4</b>
2,646	Insurance Sales Agents	190
1,205	Customer Service Representatives	117
674	Office Clerks, General	62
582	Claims Adjusters, Examiners, and Investigators	62
411	Securities, Commodities, and Financial Services Sales Agents	51
333	Insurance Underwriters	49
320	First-Line Supervisors/Managers of Office and Administrative	34
295	Executive Secretaries and Administrative Assistants	29
283	Bookkeeping, Accounting, and Auditing Clerks	28
275	Personal Financial Advisors	26
266	Secretaries, Except Legal, Medical, and Executive	22
248	General and Operations Managers	20
224	Computer Systems Analysts	19
211	Accountants and Auditors	18
206	Business Operations Specialists, All Other	17
200	Brokerage Clerks	15
200	Tellers	15
193	Financial Analysts	14
191	Loan Officers	12
190	Receptionists and Information Clerks	12
182	Financial Managers	11
181	Health Professionals and Technicians, All Other (QES Only)	9
177	Title Examiners, Abstractors, and Searchers	9
176	Registered Nurses	8
170	First-Line Supervisors/Managers of Non-Retail Sales Workers	8

<b>Existing Clusters, Industry List: Greater Charlottesville</b>	
<b>AGRICULTURE, FORESTRY, AND FISHING</b>	
Fruit and Tree Nut Farming	
Logging	
Other Animal Production	
Greenhouse, Nursery, and Floriculture Production	
Cattle Ranching and Farming	
Support Activities for Animal Production	
Support Activities for Crop Production	
Support Activities for Forestry	
Other Crop Farming	
Timber Tract Operations	
Vegetable and Melon Farming	
<b>COMMUNICATION &amp; ENTERTAINMENT</b>	
Newspaper, Periodical, Book, and Directory Publishers	
Radio and Television Broadcasting	
Software Publishers	
Independent Artists, Writers, and Performers	
Agents and Managers for Artists, Athletes, Entertainers, and Other Public Figure	
Sound Recording Industries	
Promoters of Performing Arts, Sports, and Similar Events	
<b>ELECTRONICS EQUIPMENT &amp; INSTRUMENTS MANUFACTURING</b>	
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	
Semiconductor and Other Electronic Component Manufacturing	
Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing	
<b>INDUSTRIAL MACHINERY MANUFACTURING</b>	
Industrial Machinery Manufacturing	
Communications Equipment Manufacturing	
<b>HEALTH CARE</b>	
General Medical and Surgical Hospitals	
Outpatient Care Centers	
Nursing Care Facilities	
Home Health Care Services	

### **Emerging Clusters, Industry List: Greater Charlottesville**

#### **CHEMICALS & MATERIALS**

Other Nonmetallic Mineral Product Manufacturing

Other Chemical Product and Preparation Manufacturing

Clay Product and Refractory Manufacturing

#### **FINANCE AND INSURANCE**

Agencies, Brokerages, and Other Insurance Related Activities

Insurance Carriers

Other Financial Investment Activities

Activities Related to Credit Intermediation

Other Investment Pools and Funds

#### **METALS AND RELATED MANUFACTURING**

Machine Shops, Turned Product, and Screw, Nut, and Bolt Manufacturing

Agriculture, Construction, and Mining Machinery Manufacturing

Metalworking Machinery Manufacturing

### **Top 25 Skills-Based Industry Targets for Greater Charlottesville's Displaced Workers**

The table below displays the top 25 skill-based industry recruitment targets for Greater Charlottesville, based on a comparison of the skills inherent to the region's displaced workers, and the skill requirements of individual industries.

Rank	Industry Title
1	Lawn and Garden Equipment and Supplies Stores
2	Grocery and Related Product Wholesalers
3	Miscellaneous Nondurable Goods Merchant Wholesalers
4	Petroleum and Petroleum Products Merchant Wholesalers
5	Miscellaneous Durable Goods Merchant Wholesalers
6	Chemical and Allied Products Merchant Wholesalers
7	Beer, Wine, and Distilled Alcoholic Beverage Merchant Wholesalers
8	Furniture Stores
9	Automotive Parts, Accessories, and Tire Stores
10	Apparel, Piece Goods, and Notions Merchant Wholesalers
11	Motor Vehicle, and Motor Vehicle, Parts and Supplies Merchant Wholesalers
12	Other Motor Vehicle Dealers
13	Drugs and Druggists' Sundries Merchant Wholesalers
14	Other Furniture Related Product Manufacturing
15	Lumber and Other Construction Materials Merchant Wholesalers
16	Metal and Mineral (except Petroleum), Merchant Wholesalers
17	Furniture and Home Furnishing Merchant Wholesalers
18	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers
19	Manufacturing and Reproducing Magnetic and Optical Media
20	Electrical and Electronic Goods Merchant Wholesalers
21	Professional and Commercial Equipment and Supplies Merchant Wholesalers
22	Other Miscellaneous Manufacturing
23	Specialty Food Stores
24	Paper and Paper Product Merchant Wholesalers
25	Electronics and Appliance Stores

A total of 295 industries were ranked.

Region 2000 Existing Industry Clusters  
(ranked by 2004 employment)

METALS AND RELATED MANUFACTURING  
HEALTH CARE  
WOOD PRODUCT MANUFACTURING  
DISTRIBUTION & WAREHOUSING  
FOOD PROCESSING\*  
CHEMICALS & MATERIALS\*  
TEXTILES & APPAREL\*  
ELECTRONICS EQUIPMENT & INSTRUMENTS MFG  
AGRICULTURE, FORESTRY, AND FISHING\*

Estimated Employment, 2004q4	Top 25 Occupations for Existing Industry Clusters
1,591	Nursing Aides, Orderlies, and Attendants
1,494	Registered Nurses
1,057	Team Assemblers
964	Truck Drivers, Heavy and Tractor-Trailer
651	Laborers and Freight, Stock, and Material Movers, Hand
637	Licensed Practical and Licensed Vocational Nurses
609	Machinists
595	Office Clerks, General
586	First-Line Supervisors/Managers of Production and Operating Workers
513	Welders, Cutters, Solderers, and Brazers
492	Maintenance and Repair Workers, General
472	Inspectors, Testers, Sorters, Samplers, and Weighers
445	General and Operations Managers
389	Home Health Aides
387	Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic
354	Maids and Housekeeping Cleaners
352	Industrial Truck and Tractor Operators
352	Bookkeeping, Accounting, and Auditing Clerks
328	Helpers--Production Workers
316	Assemblers and Fabricators, All Other
295	Secretaries, Except Legal, Medical, and Executive
288	Shipping, Receiving, and Traffic Clerks
286	Truck Drivers, Light or Delivery Services
280	Woodworking Machine Setters, Operators, and Tenders, Except Sawing
266	Structural Metal Fabricators and Fitters

Region 2000 Emerging Industry Clusters

(ranked by 2004 employment)

INFORMATION TECHNOLOGY AND PROFESSIONAL SERVICES  
FINANCE AND INSURANCE  
AUTOMOTIVE MANUFACTURING\*  
COMMUNICATION & ENTERTAINMENT  
MEDICAL RELATED PRODUCTS MANUFACTURING\*

\* These clusters have low growth potential and therefore would not be considered as "target" clusters, although individual industries may have good growth potential.

Estimated Employment, 2004q4	Top 25 Occupations for Emerging Industry Clusters	Estimated Employment, 2004q4
155	Accountants and Auditors	155
99	Team Assemblers	99
95	Office Clerks, General	95
79	Bookkeeping, Accounting, and Auditing Clerks	79
78	Customer Service Representatives	78
66	General and Operations Managers	66
64	Secretaries, Except Legal, Medical, and Executive	64
62	Civil Engineers	62
60	Securities, Commodities, and Financial Services Sales Agents	60
58	Electrical Engineers	58
56	Computer Programmers	56
55	Welders, Cutters, Solderers, and Brazers	55
54	Executive Secretaries and Administrative Assistants	54
53	Computer Systems Analysts	53
51	First-Line Supervisors/Managers of Office and Administrative Tellers	51
49	Assemblers and Fabricators, All Other	49
48	Management Analysts	48
46	Computer Software Engineers, Applications	46
45	Tax Preparers	45
40	Computer Software Engineers, Systems Software	40
38	Computer Support Specialists	38
37	Inspectors, Testers, Sorters, Samplers, and Weighers	37
36	Loan Officers	36
33	Architects, Except Landscape and Naval	33

<b>Existing Clusters, Industry List: Region 2000</b>	
AGRICULTURE, FORESTRY, AND FISHING	
Logging	
Cattle Ranching and Farming	
Support Activities for Animal Production	
Greenhouse, Nursery, and Floriculture Production	
CHEMICALS & MATERIALS	
Rubber Product Manufacturing	
Paint, Coating, and Adhesive Manufacturing	
Other Chemical Product and Preparation Manufacturing	
DISTRIBUTION & WAREHOUSING	
General Freight Trucking	
Automotive Repair and Maintenance	
Specialized Freight Trucking	
Warehousing and Storage	
Automotive Equipment Rental and Leasing	
Support Activities for Rail Transportation	
Freight Transportation Arrangement	
Scenic and Sightseeing Transportation, Water	
Support Activities for Air Transportation	
ELECTRONICS EQUIPMENT & INSTRUMENTS MANUFACTURING	
Semiconductor and Other Electronic Component Manufacturing	
Communications Equipment Manufacturing	
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	
FOOD PROCESSING	
Animal Slaughtering and Processing	
Animal Food Manufacturing	
HEALTH CARE	
General Medical and Surgical Hospitals	
Nursing Care Facilities	

<b>Existing Clusters, Industry List: Region 2000 (cont.)</b>	
HEALTH CARE (continued)	
Community Care Facilities for the Elderly	
Residential Mental Retardation, Mental Health and Substance Abuse Facilities	
Outpatient Care Centers	
Other Residential Care Facilities	
Medical and Diagnostic Laboratories	
Other Ambulatory Health Care Services	
METALS AND RELATED MANUFACTURING	
Architectural and Structural Metals Manufacturing	
Boiler, Tank, and Shipping Container Manufacturing	
Other General Purpose Machinery Manufacturing	
Foundries	
Machine Shops, Turned Product, and Screw, Nut, and Bolt Manufacturing	
Other Fabricated Metal Product Manufacturing	
Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing	
Metalworking Machinery Manufacturing	
Industrial Machinery Manufacturing	
TEXTILES & APPAREL	
Fabric Mills	
Textile and Fabric Finishing and Fabric Coating Mills	
Cut and Sew Apparel Manufacturing	
WOOD PRODUCT & FURNITURE MANUFACTURING	
Household and Institutional Furniture and Kitchen Cabinet Manufacturing	
Pulp, Paper, and Paperboard Mills	
Sawmills and Wood Preservation	
Other Wood Product Manufacturing	
Office Furniture (including Fixtures) Manufacturing	
Veneer, Plywood, and Engineered Wood Product Manufacturing	

Emerging Clusters, Industry List: Region 2000	
AUTOMOTIVE MANUFACTURING	
Electric Lighting Equipment Manufacturing	
Motor Vehicle Body and Trailer Manufacturing	
Motor Vehicle Parts Manufacturing	
COMMUNICATION & ENTERTAINMENT	
Radio and Television Broadcasting	
Spectator Sports	
FINANCE AND INSURANCE	
Nondepository Credit Intermediation	
Activities Related to Credit Intermediation	
Securities and Commodity Contracts Intermediation and Brokerage	
Other Financial Investment Activities	
INFORMATION TECHNOLOGY AND PROF. SERVICES	
Data Processing, Hosting, and Related Services	
Accounting, Tax Preparation, Bookkeeping, and Payroll Services	
Architectural, Engineering, and Related Services	
Computer Systems Design and Related Services	
MEDICAL RELATED PRODUCTS MANUFACTURING	
Medical Equipment and Supplies Manufacturing	
Other Miscellaneous Manufacturing	

### Top 25 Skills-Based Industry Targets for Region 2000's Displaced Workers

The table below displays the top 25 skill-based industry recruitment targets for Region 2000, based on a comparison of the skills inherent to the region's displaced workers, and the skill requirements of individual industries.

Rank	Industry Title
1	Audio and Video Equipment Manufacturing
2	Communications Equipment Manufacturing
3	Electrical Equipment Manufacturing
4	Semiconductor and Other Electronic Component Mfg.
5	Electric Lighting Equipment Manufacturing
6	Other Electrical Equipment and Component Manufacturing
7	Computer and Peripheral Equipment Manufacturing
8	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing
9	Satellite Telecommunications
10	Motor Vehicle Manufacturing
11	Electronic and Precision Equipment Repair and Maintenance
12	Commercial and Service Industry Machinery Manufacturing
13	Manufacturing and Reproducing Magnetic and Optical Media
14	Household Appliance Manufacturing
15	Medical Equipment and Supplies Manufacturing
16	Other Support Services
17	Railroad Rolling Stock Manufacturing
18	Motor Vehicle Parts Manufacturing
19	Glass and Glass Product Manufacturing
20	Electrical and Electronic Goods Merchant Wholesalers
21	Other General Purpose Machinery Manufacturing
22	Other Miscellaneous Manufacturing
23	Other Chemical Product and Preparation Manufacturing
24	Apparel, Piece Goods, and Nations Merchant Wholesalers
25	Textile and Fabric Finishing and Fabric Coating Mills

A total of 295 industries were ranked.

**Southside Virginia Existing Industry Clusters**  
(ranked by 2004 employment)

**WOOD PRODUCT MANUFACTURING**  
**TEXTILES & APPAREL\***  
**HEALTH CARE**  
**CHEMICALS & MATERIALS\***  
**DISTRIBUTION & WAREHOUSING**  
**TOBACCO MANUFACTURING\***  
**FOOD PROCESSING\***  
**AGRICULTURE, FORESTRY, AND FISHING\***  
**AUTOMOTIVE MANUFACTURING**  
**COMMUNICATION & ENTERTAINMENT**  
**NONMETALLIC MINERALS & RELATED PRODUCTS\***

\* These clusters have low growth potential and therefore would not be considered as “target” clusters, although individual industries may have good growth potential.

<b>Top 25 Occupations for Existing Industry Clusters (con't)</b>	
Customer Service Representatives	
Extruding and Forming Machine Setters, Operators, and Tenders, Synthetic/Glass Fiber	
Shipping, Receiving, and Traffic Clerks	
Paper Goods Machine Setters, Operators, and Tenders	
Machine Feeders and Offbearers	

<b>Estimated Employment, 2004q4</b>	<b>Top 25 Occupations for Existing Industry Clusters</b>
1,169	Laborers and Freight, Stock, and Material Movers, Hand
1,072	Registered Nurses
1,066	Team Assemblers
897	First-Line Supervisors/Managers of Production and Operating Workers
877	Nursing Aides, Orderlies, and Attendants
803	Woodworking Machine Setters, Operators, and Tenders, Except Sawing
771	Truck Drivers, Heavy and Tractor-Trailer
759	Inspectors, Testers, Sorters, Samplers, and Weighers
712	Industrial Truck and Tractor Operators
699	Sewing Machine Operators
573	Office Clerks, General
550	Maintenance and Repair Workers, General
512	Textile Winding, Twisting, and Drawing Out Machine Setters, Operators, and Tenders
509	Helpers-Production Workers
507	Cabinetmakers and Bench Carpenters
462	Packers and Packagers, Hand
429	Textile Knitting and Weaving Machine Setters, Operators, and Tenders
403	Industrial Machinery Mechanics
397	General and Operations Managers
396	Licensed Practical and Licensed Vocational Nurses

**Southside Virginia Emerging Industry Clusters**  
(ranked by 2004 employment)

**INFORMATION TECHNOLOGY AND PROFESSIONAL SERVICES**  
**PRINTING & PAPER PRODUCTS MANUFACTURING\***  
**FINANCE AND INSURANCE**  
**METALS AND RELATED MANUFACTURING**  
**ELECTRONICS EQUIPMENT & INSTRUMENTS MANUFACTURING**

\* These clusters have low growth potential and therefore would not be considered as “target” clusters, although individual industries may have good growth potential.

<b>Top 25 Occupations for Emerging Industry Clusters</b>	<b>Estimated Employment, 2004q4</b>
Paper Goods Machine Setters, Operators, and Tenders	300
Customer Service Representatives	185
Accountants and Auditors	134
Office Clerks, General	125
Team Assemblers	109
Lawyers	107
Bookkeeping, Accounting, and Auditing Clerks	96
First-Line Supervisors/Managers of Production and Operating	92
Tellers	87
First-Line Supervisors/Managers of Office and Administrative	87
Maintenance and Repair Workers, General	85
Insurance Sales Agents	80
Industrial Machinery Mechanics	73
Electrical and Electronic Equipment Assemblers	73
Telemarketers	70
General and Operations Managers	67
Industrial Truck and Tractor Operators	65
Helpers--Production Workers	60
Loan Officers	60
Machinists	55
Computer Programmers	55
Laborers and Freight, Stock, and Material Movers, Hand	55
Paralegals and Legal Assistants	53
Bill and Account Collectors	51
Inspectors, Testers, Sorters, Samplers, and Weighers	49

**Existing Clusters, Industry List: Southside Virginia**

AGRICULTURE, FORESTRY, AND FISHING	Hunting and Trapping
Support Activities for Forestry	
Timber Tract Operations	
Support Activities for Animal Production	
AUTOMOTIVE MANUFACTURING	
Motor Vehicle Parts Manufacturing	
Motor Vehicle Manufacturing	
Industrial Machinery Manufacturing	
CHEMICALS & MATERIALS	
Rubber Product Manufacturing	
Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing	
COMMUNICATION & ENTERTAINMENT	
Radio and Television Broadcasting	
Cable and Other Subscription Programming	
DISTRIBUTION & WAREHOUSING	
Warehousing and Storage	
General Freight Trucking	
Specialized Freight Trucking	
Automotive Equipment Rental and Leasing	
Other Support Activities for Transportation	
Support Activities for Road Transportation	
FOOD PROCESSING	
Other Food Manufacturing	
Beverage Manufacturing	
Sugar and Confectionery Product Manufacturing	
HEALTH CARE	
General Medical and Surgical Hospitals	
Nursing Care Facilities	
Community Care Facilities for the Elderly	
Home Health Care Services	

<b>Emerging Clusters, Industry List: Southside Virginia</b>	
ELECTRONICS EQUIPMENT & INSTRUMENTS MANUFACTURING	
Other Electrical Equipment and Component Manufacturing	
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	
Aerospace Product and Parts Manufacturing	
FINANCE AND INSURANCE	
Nondepository Credit Intermediation	
Agencies, Brokerages, and Other Insurance, Related Activities	
Other Financial Investment Activities	
INFORMATION TECHNOLOGY AND PROFESSIONAL SERVICES	
Accounting, Tax Preparation, Bookkeeping, and Payroll Services	
Legal Services	
Data Processing, Hosting, and Related Services	
Business Support Services	
Other Professional, Scientific, and Technical Services	
Computer Systems Design and Related Services	
METALS AND RELATED MANUFACTURING	
Machine Shops, Turned Product, and Screw, Nut, and Bolt Manufacturing	
Electrical Equipment Manufacturing	
Foundries	
Other Fabricated Metal Product Manufacturing	
Architectural and Structural Metals Manufacturing	
Other General Purpose Machinery Manufacturing	
Cutlery and Handtool Manufacturing	
Coating, Engraving, Heat Treating, and Allied Activities	
PRINTING & PAPER PRODUCTS MANUFACTURING	
Converted Paper Product Manufacturing	
Pulp, Paper, and Paperboard Mills	

<b>Existing Clusters, Industry List: Southside Virginia (cont.)</b>	
HEALTH CARE (continued)	
Outpatient Care Centers	
Other Ambulatory Health Care Services	
Other Residential Care Facilities	
Residential Mental Retardation, Mental Health and Substance Abuse Facilities	
NONMETALLIC MINERALS & RELATED PRODUCTS	
Nonmetallic Mineral Mining and Quarrying	
Fabric Mills	
Textile and Fabric Finishing and Fabric Coating Mills	
Textile Furnishings Mills	
Other Textile Product Mills	
Cut and Sew Apparel Manufacturing	
Apparel Knitting Mills	
TOBACCO MANUFACTURING	
Tobacco Manufacturing	
Printing and Related Support Activities	
WOOD PRODUCT & FURNITURE MANUFACTURING	
Household and Institutional Furniture and Kitchen Cabinet Manufacturing	
Other Wood Product Manufacturing	
Veneer, Plywood, and Engineered Wood Product Manufacturing	
Sawmills and Wood Preservation	
Office Furniture (including Fixtures) Manufacturing	

### **Top 25 Skills-Based Industry Targets for Southside Virginia's Displaced Workers**

The table below displays the top 25 skill-based industry recruitment targets for Southside Virginia, based on a comparison of the skills inherent to the region's displaced workers, and the skill requirements of individual industries.

Rank	Industry Title
1	Apparel Knitting Mills
2	Textile Furnishings Mills
3	Textile and Fabric Finishing and Fabric Coating Mills
4	Support Activities for Air Transportation
5	Railroad Rolling Stock Manufacturing
6	Glass and Glass Product Manufacturing
7	Pipeline Transportation of Natural Gas
8	Support Activities for Rail Transportation
9	Electric Power Generation, Transmission and Distribution
10	Tobacco Manufacturing
11	Natural Gas Distribution
12	Boiler, Tank, and Shipping Container Manufacturing
13	Motor Vehicle, Body and Trailer Manufacturing
14	Other Nonmetallic Mineral Product Manufacturing
15	Clay Product and Refractory Manufacturing
16	Lime and Gypsum Product Manufacturing
17	Fabric Mills
18	Agriculture, Construction, and Mining Machinery Manufacturing
19	Other Miscellaneous Manufacturing
20	Other Furniture-Related Product Manufacturing
21	Animal Food Manufacturing
22	Dairy Product Manufacturing
23	Other Transportation Equipment Manufacturing
24	Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing
25	Ship and Boat Building

A total of 295 industries were ranked.

**Lake Country Existing Industry Clusters**  
 (ranked by 2004 employment)

**HEALTH CARE**  
**DISTRIBUTION & WAREHOUSING**  
**TEXTILES & APPAREL\***  
**WOOD PRODUCT MANUFACTURING**  
**AGRICULTURE, FORESTRY, AND FISHING\***  
**ELECTRONICS EQUIPMENT & INSTRUMENTS MANUFACTURING**  
**METALS AND RELATED MANUFACTURING**

**Lake Country Emerging Industry Clusters**  
 (ranked by 2004 employment)

**INFORMATION TECHNOLOGY AND PROFESSIONAL SERVICES**  
**FOOD PROCESSING\***  
**FINANCE AND INSURANCE**

\* These clusters have low growth potential and therefore would not be considered as "target" clusters, although individual industries may have good growth potential.

<b>Top 25 Occupations for Existing Industry Clusters</b>	<b>Estimated Employment, 2004q4</b>
Labors and Freight, Stock, and Material Movers, Hand	769
Truck Drivers, Heavy and Tractor-Trailer	534
Registered Nurses	485
Nursing Aides, Orderlies, and Attendants	358
Industrial Truck and Tractor Operators	279
Office Clerks, General	190
Logging Equipment Operators	173
Stock Clerks and Order Fillers	170
Licensed Practical and Licensed Vocational Nurses	166
Team Assemblers	162
Sewing Machine Operators	134
First-Line Supervisors/Managers of Production and Operating	123
Maintenance and Repair Workers, General	112
General and Operations Managers	110
Home Health Aides	109
Truck Drivers, Light or Delivery Services	104
Woodworking Machine Setters, Operators, and Tenders, Except Sawing	98
Bookkeeping, Accounting, and Auditing Clerks	97
Inspectors, Testers, Sorters, Samplers, and Weighers	86
First-Line Supervisors/Managers of Office and Administrative	86
Secretaries, Except Legal, Medical, and Executive	82
Maids and Housekeeping Cleaners	82
Fallers	81
Electrical and Electronic Equipment Assemblers	76
Customer Service Representatives	75

<b>Top 25 Occupations for Emerging Industry Clusters</b>	<b>Estimated Employment, 2004q4</b>
Accountants and Auditors	47
Telemarketers	42
Meat, Poultry, and Fish Cutters and Trimmers	33
Customer Service Representatives	28
Office Clerks, General	23
Bill and Account Collectors	20
Bookkeeping, Accounting, and Auditing Clerks	20
Packaging and Filling Machine Operators and Tenders	19
Slaughterers and Meat Packers	17
Tax Preparers	17
Management Analysts	15
First-Line Supervisors/Managers of Office and Administrative	13
Secretaries, Except Legal, Medical, and Executive	12
Laborers and Freight, Stock, and Material Movers, Hand	12
General and Operations Managers	10
Veterinary Assistants and Laboratory Animal Caretakers	9
First-Line Supervisors/Managers of Production and Operating	9
Food Batchmakers	8
Receptionists and Information Clerks	8
Nonfarm Animal Caretakers	7
Industrial Truck and Tractor Operators	7
Inspectors, Testers, Sorters, Samplers, and Weighers	7
Executive Secretaries and Administrative Assistants	6
Maintenance and Repair Workers, General	6
Helpers-Production Workers	6

**Existing Clusters, Industry List: Lake Country****AGRICULTURE, FORESTRY, AND FISHING**

Logging
Other Crop Farming
Cattle Ranching and Farming
Forest Nurseries and Gathering of Forest Products
Support Activities for Forestry
Hunting and Trapping
Support Activities for Crop Production
Oilseed and Grain Farming
Timber Tract Operations
DISTRIBUTION & WAREHOUSING
Warehousing and Storage
Specialized Freight Trucking
General Freight Trucking
Automotive Equipment Rental and Leasing
ELECTRONICS EQUIPMENT & INSTRUMENTS MANUFACTURING
Electrical Equipment Manufacturing
Semiconductor and Other Electronic Component Manufacturing
HEALTH CARE
General Medical and Surgical Hospitals
Nursing Care Facilities
Community Care Facilities for the Elderly
Home Health Care Services
Residential Mental Retardation, Mental Health and Substance Abuse Facilities
Outpatient Care Centers
Other Ambulatory Health Care Services
Medical and Diagnostic Laboratories
METALS AND RELATED MANUFACTURING
Spring and Wire Product Manufacturing
Architectural and Structural Metals Manufacturing
Iron and Steel Mills and Ferroalloy Manufacturing

**Existing Clusters, Industry List: Lake Country (cont.)****TEXTILES & APPAREL**

Textile Furnishings Mills
Fiber, Yarn, and Thread Mills
Fabric Mills

**Emerging Clusters, Industry List: Lake Country**

FINANCE AND INSURANCE
Nondepository Credit Intermediation
Other Financial Investment Activities
FOOD PROCESSING
Animal Food Manufacturing
Beverage Manufacturing
INFORMATION TECHNOLOGY AND PROFESSIONAL SERVICES
Accounting, Tax Preparation, Bookkeeping, and Payroll Services
Business Support Services
Other Professional, Scientific, and Technical Services
Management, Scientific, and Technical Consulting Services

### Top 25 Skills-Based Industry Targets for Lake Country's Displaced Workers

The table below displays the top 25 skill-based industry recruitment targets for Lake County, based on a comparison of the skills inherent to the region's displaced workers, and the skill requirements of individual industries.

Rank	Industry Title
1	Department Stores
2	Clothing Stores
3	Other General Merchandise Stores
4	Drinking Places (Alcoholic Beverages)
5	Shoe Stores
6	Full-Service Restaurants
7	Interurban and Rural Bus Transportation
8	Book, Periodical, and Music Stores
9	Scenic and Sightseeing Transportation, Land
10	Sporting Goods, Hobby, and Musical Instrument Stores
11	Grocery Stores
12	Gassoline Stations
13	Charter Bus Industry
14	Jewelry, Luggage, and Leather Goods Stores
15	Beer, Wine, and Liquor Stores
16	Used Merchandise Stores
17	Limited-Service Eating Places
18	Taxi and Limousine Service
19	Urban Transit Systems
20	Office Supplies, Stationery, and Gift Stores
21	Other Miscellaneous Store Retailers
22	Home Furnishings Stores
23	Special Food Services
24	Building Material and Supplies Dealers
25	Scheduled Air Transportation

A total of 295 industries were ranked.

**Virginia's Heartland Existing Industry Clusters**  
 (ranked by 2004 employment)

**HEALTH CARE**  
**WOOD PRODUCT MANUFACTURING**  
**METALS AND RELATED MANUFACTURING**  
**TEXTILES & APPAREL\***  
**AGRICULTURE, FORESTRY, AND FISHING\***

**Virginia's Heartland Emerging Industry Clusters**  
 (ranked by 2004 employment)

**INFORMATION TECHNOLOGY AND PROFESSIONAL SERVICES**  
**FINANCE AND INSURANCE**

\* These clusters have low growth potential and therefore would not be considered as “target” clusters, although individual industries may have good growth potential.

<b>Top 25 Occupations for Existing Industry Clusters</b>	<b>Estimated Employment, 2004q4</b>
Nursing Aides, Orderlies, and Attendants	396
Registered Nurses	345
Team Assemblers	250
Logging Equipment Operators	165
Licensed Practical and Licensed Vocational Nurses	162
Laborers and Freight, Stock, and Material Movers, Hand	155
Woodworking Machine Setters, Operators, and Tenders, Except Sawing	151
First-Line Supervisors/Managers of Production and Operating	121
Office Clerks, General	112
Industrial Truck and Tractor Operators	108
Home Health Aides	100
Maintenance and Repair Workers, General	97
Inspectors, Testers, Sorters, Samplers, and Weighers	96
Truck Drivers, Heavy and Tractor-Trailer	90
Sawing Machine Setters, Operators, and Tenders, Wood	88
Maids and Housekeeping Cleaners	85
Carpenters	81
General and Operations Managers	78
Farmworkers and Laborers, Crop, Nursery, and Greenhouse	76
Fallers	76
Helpers--Production Workers	75
Secretaries, Except Legal, Medical, and Executive	72
Bookkeeping, Accounting, and Auditing Clerks	64
Sewing Machine Operators	61
Textile Winding, Twisting, and Drawing Out Machine Setters, Operators, Tenders	61

<b>Top 25 Occupations for Emerging Industry Clusters</b>	<b>Estimated Employment, 2004q4</b>
Insurance Sales Agents	33
Accountants and Auditors	25
Customer Service Representatives	21
Office Clerks, General	20
Veterinary Assistants and Laboratory Animal Caretakers	16
Nonfarm Animal Caretakers	13
Receptionists and Information Clerks	13
Bookkeeping, Accounting, and Auditing Clerks	13
Claims Adjusters, Examiners, and Investigators	11
Veterinarians	10
Secretaries, Except Legal, Medical, and Executive	10
First-Line Supervisors/Managers of Office and Administrative	9
Insurance Underwriters	9
General and Operations Managers	8
Tax Preparers	8
Veterinary Technologists and Technicians	8
Photographers	7
Computer Systems Analysts	7
Executive Secretaries and Administrative Assistants	7
Management Analysts	7
Civil Engineers	6
Electrical Engineers	6
Business Operations Specialists, All Other	5
Computer Software Engineers, Applications	4
Registered Nurses	4

<b>Existing Clusters, Industry List: Virginia's Heartland (cont.)</b>	
AGRICULTURE, FORESTRY AND FISHING	WOOD PRODUCT & FURNITURE MANUFACTURING
Logging	Sawmills and Wood Preservation
Cattle Ranching and Farming	Other Wood Product Manufacturing
Other Animal Production	Household and Institutional Furniture and Kitchen Cabinet Manufacturing
Other Crop Farming	Veneer, Plywood, and Engineered Wood Product Manufacturing
Support Activities for Forestry	
Support Activities for Crop Production	
Support Activities for Animal Production	
Timber Tract Operations	
<b>HEALTH CARE</b>	<b>Emerging Clusters, Industry List: Virginia's Heartland</b>
Nursing Care Facilities	FINANCE AND INSURANCE
General Medical and Surgical Hospitals	Agencies, Brokerages, and Other Insurance Related Activities
Outpatient Care Centers	Securities and Commodity Contracts Intermediation and Brokerage
Residential Mental Retardation, Mental Health and Substance Abuse Facilities	INFORMATION TECHNOLOGY AND PROFESSIONAL SERVICES
Community Care Facilities for the Elderly	Other Professional, Scientific, and Technical Services
Other Ambulatory Health Care Services	Architectural, Engineering, and Related Services
Other Residential Care Facilities	Accounting, Tax Preparation, Bookkeeping, and Payroll Services
Medical and Diagnostic Laboratories	Computer Systems Design and Related Services
<b>METALS AND RELATED MANUFACTURING</b>	
Plastics Product Manufacturing	
Other Electrical Equipment and Component Manufacturing	
Other Nonmetallic Mineral Product Manufacturing	
Cement and Concrete Product Manufacturing	
Architectural and Structural Metals Manufacturing	
Machine Shops, Turned Product, and Screw, Nut, and Bolt Manufacturing	
Cutlery and Handtool Manufacturing	
Motor Vehicle Parts Manufacturing	
Metalworking Machinery Manufacturing	
<b>TEXTILES &amp; APPAREL</b>	
Fabric Mills	
Cut and Sew Apparel Manufacturing	
Other Textile Product Mills	

<b>Existing Clusters, Industry List: Virginia's Heartland</b>
AGRICULTURE, FORESTRY AND FISHING
Logging
Cattle Ranching and Farming
Other Animal Production
Other Crop Farming
Support Activities for Forestry
Support Activities for Crop Production
Support Activities for Animal Production
Timber Tract Operations
<b>HEALTH CARE</b>
Nursing Care Facilities
General Medical and Surgical Hospitals
Outpatient Care Centers
Residential Mental Retardation, Mental Health and Substance Abuse Facilities
Community Care Facilities for the Elderly
Other Ambulatory Health Care Services
Other Residential Care Facilities
Medical and Diagnostic Laboratories
<b>METALS AND RELATED MANUFACTURING</b>
Plastics Product Manufacturing
Other Electrical Equipment and Component Manufacturing
Other Nonmetallic Mineral Product Manufacturing
Cement and Concrete Product Manufacturing
Architectural and Structural Metals Manufacturing
Machine Shops, Turned Product, and Screw, Nut, and Bolt Manufacturing
Cutlery and Handtool Manufacturing
Motor Vehicle Parts Manufacturing
Metalworking Machinery Manufacturing
<b>TEXTILES &amp; APPAREL</b>
Fabric Mills
Cut and Sew Apparel Manufacturing
Other Textile Product Mills

### Top 25 Skills-Based Industry Targets for Virginia's Heartland's Displaced Workers

The table below displays the top 25 skill-based industry recruitment targets for Virginia's Heartland, based on a comparison of the skills inherent to the region's displaced workers, and the skill requirements of individual industries.

Rank	Industry Title
1	School and Employee Bus Transportation
2	Services to Buildings and Dwellings
3	Support Activities for Crop Production
4	General Freight Trucking
5	Waste Collection
6	Specialized Freight Trucking
7	Couriers
8	Animal Slaughtering and Processing
9	Logging
10	Highway, Street, and Bridge Construction
11	Cut and Sew Apparel Manufacturing
12	Support Activities for Animal Production
13	Apparel Accessories and Other Apparel Manufacturing
14	Drycleaning and Laundry Services
15	Other Specialty Trade Contractors
16	Support Activities for Road Transportation
17	Household and Institutional Furniture and Kitchen Cabinet Manufacturing
18	Other Heavy and Civil Engineering Construction
19	Cement and Concrete Product Manufacturing
20	Remediation and Other Waste Management Services
21	Utility System Construction
22	Waste Treatment and Disposal
23	Sawmills and Wood Preservation
24	Building Finishing Contractors
25	Foundation, Structure, and Building Exterior Contractors

A total of 295 industries were ranked.

**Greater Richmond Existing Industry Clusters**  
(ranked by 2004 employment)

FINANCE AND INSURANCE  
INFORMATION TECHNOLOGY AND PROFESSIONAL SERVICES  
HEALTH CARE  
COMMUNICATION & ENTERTAINMENT  
CHEMICALS & MATERIALS\*  
DISTRIBUTION & WAREHOUSING  
ELECTRONICS EQUIPMENT & INSTRUMENTS MANUFACTURING  
FOOD PROCESSING\*  
WOOD PRODUCT MANUFACTURING  
AUTOMOTIVE MANUFACTURING\*  
AGRICULTURE, FORESTRY, AND FISHING\*

**Greater Richmond Emerging Industry Clusters**  
(ranked by 2004 employment)

**MEDICAL RELATED PRODUCTS MANUFACTURING\***  
**METALS AND RELATED MANUFACTURING**

\* These clusters have low growth potential and therefore would not be considered as "target" clusters, although individual industries may have good growth potential.

<b>Top 25 Occupations for Emerging Industry Clusters</b>		<b>Estimated Employment, 2004q4</b>
Team Assemblers		349
Machinists		175
First-Line Supervisors/Managers of Production & Operating		156
Welders, Cutters, Solderers, and Brazers		142
Dental Laboratory Technicians		122
Inspectors, Testers, Sorters, Samplers, and Weighers		111
Assemblers and Fabricators, All Other		106
Extruding & Drawing Machine Setters, Operators, and Tenders		104
Cutting, Punching, and Press Machine Setters, Operators, and Tenders		103
General and Operations Managers		90
Shipping, Receiving, and Traffic Clerks		78
Sheet Metal Workers		76
Structural Metal Fabricators and Fitters		75
Sales Representatives, Wholesale and Manufacturing, Except Technical & Scientific Products		72
Laborers and Freight, Stock, and Material Movers, Hand		70
Maintenance and Repair Workers, General		69
Office Clerks, General		69
Bookkeeping, Accounting, and Auditing Clerks		64
Helpers--Production Workers		56
Computer-Controlled Machine Tool Operators, Metal and Plastic		49
Packers and Packagers, Hand		48
Secretaries, Except Legal, Medical, and Executive		46
Industrial Production Managers		43
Installation, Maintenance, and Repair Workers, All Other		41
Customer Service Representatives		36
Receptionists and Information Clerks		1,129

**Existing Clusters, Industry List: Greater Richmond**

AGRICULTURE, FORESTRY, AND FISHING	
Logging	
Support Activities for Animal Production	
Support Activities for Crop Production	
Support Activities for Forestry	
AUTOMOTIVE MANUFACTURING	
Motor Vehicle, Body, and Trailer Manufacturing	
CHEMICALS & MATERIALS	
Resin, Synthetic Rubber, & Artificial Synthetic Fibers & Filaments Mfg.	
Basic Chemical Manufacturing	
Other Chemical Product and Preparation Manufacturing	
Petroleum and Coal Products Manufacturing	
Paint, Coating, and Adhesive Manufacturing	
Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing	
COMMUNICATION & ENTERTAINMENT	
Wired Telecommunications Carriers	
Wireless Telecommunications Carriers (except Satellite)	
Cable and Other Program Distribution	
Cable and Other Subscription Programming	
Internet Service Providers and Web Search Portals	
Telecommunications Resellers	
Independent Artists, Writers, and Performers	
Promoters of Performing Arts, Sports, and Similar Events	
Other Information Services	
Internet Publishing and Broadcasting	
Agents and Mgrs for Artists, Athletes, Entertainers, and Other	
DISTRIBUTION & WAREHOUSING	
General Freight Trucking	
Specialized Freight Trucking	
Support Activities for Air Transportation	
Freight Transportation Arrangement	
Support Activities for Road Transportation	
Deep Sea, Coastal, and Great Lakes Water Transportation	
Support Activities for Water Transportation	
Other Support Activities for Transportation	

**Existing Clusters, Industry List: Greater Richmond (cont.)**

ELECTRONICS EQUIPMENT & INSTRUMENTS MANUFACTURING	
Semiconductor and Other Electronic Component Manufacturing	
Electrical Equipment Manufacturing	
Navigational, Measuring, Electromedical, and Control Inst. Mfg.	
Commercial and Service Industry Machinery Manufacturing	
Other Electrical Equipment and Component Manufacturing	
FINANCE AND INSURANCE	
Nondepositary Credit Intermediation	
Insurance Carriers	
Depositary Credit Intermediation	
Agencies, Brokerages, and Other Insurance Related Activities	
Securities and Commodity Contracts Intermediation and Brokerage	
Monetary Authorities - Central Bank	
Other Financial Investment Activities	
Activities Related to Credit Intermediation	
Other Investment Pools and Funds	
Insurance and Employee Benefit Funds	
FOOD PROCESSING	
Bakeries and Tortilla Manufacturing	
Other Food Manufacturing	
Dairy Product Manufacturing	
Sugar and Confectionery Product Manufacturing	
HEALTH CARE	
General Medical and Surgical Hospitals	
Community Care Facilities for the Elderly	
Home Health Care Services	
Nursing Care Facilities	
Outpatient Care Centers	
Other Residential Care Facilities	
Other Ambulatory Health Care Services	
Residential Mental Retardation, Mental Health and Substance Abuse Facilities	
Specialty (except Psychiatric and Substance Abuse) Hospitals	
Medical and Diagnostic Laboratories	

<b>Existing Clusters, Industry List: Greater Richmond (cont.)</b>	
HEALTH CARE (continued)	
Psychiatric and Substance Abuse Hospitals	
INFORMATION TECHNOLOGY AND PROFESSIONAL SERVICES	
Accounting, Tax Preparation, Bookkeeping, and Payroll Services	
Architectural, Engineering, and Related Services	
Computer Systems Design and Related Services	
Management, Scientific, and Technical Consulting Services	
Advertising and Related Services	
Other Professional, Scientific, and Technical Services	
Data Processing, Hosting, and Related Services	
NONMETALLIC MINERALS & RELATED PRODUCTS	
Nonmetallic Mineral Mining and Quarrying	
WOOD PRODUCT & FURNITURE MANUFACTURING	
Other Wood Product Manufacturing	
Sawmills and Wood Preservation	
Veneer, Plywood, and Engineered Wood Product Manufacturing	

#### **Top 25 Skills-Based Industry Targets for Greater Richmond's Displaced Workers**

The table below displays the top 25 skill-based industry recruitment targets for Greater Richmond, based on a comparison of the skills inherent to the region's displaced workers, and the skill requirements of individual industries.

Rank	Industry Title
1	Soap, Cleaning Compound, and Toilet Preparation Mfg.
2	Tobacco Manufacturing
3	Grain and Oilseed Milling
4	Textile and Fabric Finishing and Fabric Coating Mills
5	Fruit and Vegetable Preserving and Specialty Food Mfg.
6	Paint, Coating, and Adhesive Manufacturing
7	Animal Food Manufacturing
8	Other Food Manufacturing
9	Pharmaceutical and Medicine Manufacturing
10	Electric Power Generation, Transmission and Distribution
11	Beverage Manufacturing
12	Dairy Product Manufacturing
13	Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing
14	Pipeline Transportation of Natural Gas
15	Other Chemical Product and Preparation Manufacturing
16	Natural Gas Distribution
17	Manufacturing and Reproducing Magnetic and Optical Media
18	Support Activities for Air Transportation
19	Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing
20	Glass and Glass Product Manufacturing
21	Rail Transportation
22	Deep Sea, Coastal, and Great Lakes Water Transportation
23	Lime and Gypsum Product Manufacturing
24	Household Appliance Manufacturing
25	Other Support Services

A total of 295 industries were ranked.

**Greater Fredericksburg Existing Industry Clusters**  
 (ranked by 2004 employment)

**Greater Fredericksburg Emerging Industry Clusters**  
 (ranked by 2004 employment)

**INFORMATION TECHNOLOGY AND PROFESSIONAL SERVICES**  
**COMMUNICATION & ENTERTAINMENT**  
**METALS AND RELATED MANUFACTURING**  
**WOOD PRODUCT MANUFACTURING**  
**NONMETALLIC MINERALS & RELATED PRODUCTS\***  
**AGRICULTURE, FORESTRY, AND FISHING\***

**HEALTH CARE**  
**FINANCE AND INSURANCE**  
**CHEMICALS & MATERIALS\***

\* These clusters have low growth potential and therefore would not be considered as “target” clusters, although individual industries may have good growth potential.

<b>Top 25 Occupations for Existing Industry Clusters</b>	<b>Estimated Employment, 2004q4</b>
Registered Nurses	842
Computer Software Engineers, Applications	414
Office Clerks, General	408
Computer Programmers	349
Computer Software Engineers, Systems Software	336
Management Analysis	321
Computer Systems Analysts	320
General and Operations Managers	299
Nursing Aides, Orderlies, and Attendants	288
Customer Service Representatives	273
Computer Support Specialists	246
Secretaries, Except Legal, Medical, and Executive	236
Team Assemblers	217
Bookkeeping, Accounting, and Auditing Clerks	185
Business Operations Specialists, All Other	166
Licensed Practical and Licensed Vocational Nurses	156
First-Line Supervisors/Managers of Office and Administrative	151
Receptionists and Information Clerks	146
Network and Computer Systems Administrators	145
Executive Secretaries and Administrative Assistants	142
Civil Engineers	134
Insurance Sales Agents	133
Laborers and Freight, Stock, and Material Movers, Hand	121
Computer and Information Systems Managers	110

<b>Top 25 Occupations for Emerging Industry Clusters</b>	<b>Estimated Employment, 2004q4</b>
Registered Nurses	842
Nursing Aides, Orderlies, and Attendants	288
Office Clerks, General	167
Licensed Practical and Licensed Vocational Nurses	156
Insurance Sales Agents	133
Maids and Housekeeping Cleaners	99
Customer Service Representatives	88
Emergency Medical Technicians and Paramedics	81
Medical and Clinical Laboratory Technologists	78
Radiologic Technologists and Technicians	78
Secretaries, Except Legal, Medical, and Executive	70
Interviewers, Except Eligibility and Loan	63
Healthcare Support Workers, All Other	52
First-Line Supervisors/Managers of Office and Administrative	50
Billing and Posting Clerks and Machine Operators	49
Medical and Clinical Laboratory Technicians	46
Bookkeeping, Accounting, and Auditing Clerks	43
Claims Adjusters, Examiners, and Investigators	43
Respiratory Therapists	41
Receptionists and Information Clerks	41
Home Health Aides	41
Medical and Health Services Managers	38
Medical Records and Health Information Technicians	36
Insurance Underwriters	34
Executive Secretaries and Administrative Assistants	34

Existing Clusters, Industry List: Greater Fredericksburg	
COMMUNICATION & ENTERTAINMENT	
Newspaper, Periodical, Book, and Directory Publishers	
Wired Telecommunications Carriers	
Other Telecommunications	
Wireless Telecommunications Carriers (except Satellite), Cable and Other Program Distribution	
Radio and Television Broadcasting	
Internet Publishing and Broadcasting	
Internet Service Providers and Web Search Portals	
Other Information Services	
Cable and Other Subscription Programming	
Software Publishers	
INFORMATION TECHNOLOGY AND PROFESSIONAL SERVICES	
Computer Systems Design and Related Services	
Architectural, Engineering, and Related Services	
Other Professional, Scientific, and Technical Services	
Management, Scientific, and Technical Consulting Services	
Data Processing, Hosting, and Related Services	
METALS AND RELATED MANUFACTURING	
Motor Vehicle Parts Manufacturing	
Metalworking Machinery Manufacturing	
Agriculture, Construction, and Mining Machinery Manufacturing	
Machine Shops; Turned Product, and Screw, Nut, and Bolt Manufacturing	
Foundries	
NONMETALLIC MINERALS & RELATED PRODUCTS	
Cement and Concrete Product Manufacturing	
Petroleum and Coal Products Manufacturing	
Lime and Gypsum Product Manufacturing	
WOOD PRODUCT & FURNITURE MANUFACTURING	
Sawmills and Wood Preservation	
Veneer, Plywood, and Engineered Wood Product Manufacturing	
Other Wood Product Manufacturing	
Household and Institutional Furniture and Kitchen Cabinet Manufacturing	

Existing Clusters, Industry List: Greater Fredericksburg (cont.)	
WOOD PRODUCT & FURNITURE MANUFACTURING	
Sawmills and Wood Preservation	
Veneer, Plywood, and Engineered Wood Product Manufacturing	
Other Wood Product Manufacturing	
Household and Institutional Furniture and Kitchen Cabinet Manufacturing	
Office Furniture (including Fixtures) Manufacturing	
Emerging Clusters, Industry List: Greater Fredericksburg	
CHEMICALS & MATERIALS	
Plastics Product Manufacturing	
Other Nonmetallic Mineral Product Manufacturing	
Clay Product and Refractory Manufacturing	
FINANCE AND INSURANCE	
Agencies, Brokerages, and Other Insurance Related Activities	
Insurance Carriers	
Securities and Commodity Contracts Intermediation and Brokerage	
Other Financial Investment Activities	
Other Investment Pools and Funds	
HEALTHCARE	
General Medical and Surgical Hospitals	
Psychiatric and Substance Abuse Hospitals	
Community Care Facilities for the Elderly	
Other Ambulatory Health Care Services	
Medical and Diagnostic Laboratories	
Other Residential Care Facilities	

Existing Clusters, Industry List: Greater Fredericksburg	
COMMUNICATION & ENTERTAINMENT	
Newspaper, Periodical, Book, and Directory Publishers	
Wired Telecommunications Carriers	
Other Telecommunications	
Wireless Telecommunications Carriers (except Satellite), Cable and Other Program Distribution	
Radio and Television Broadcasting	
Internet Publishing and Broadcasting	
Internet Service Providers and Web Search Portals	
Other Information Services	
Cable and Other Subscription Programming	
Software Publishers	
INFORMATION TECHNOLOGY AND PROFESSIONAL SERVICES	
Computer Systems Design and Related Services	
Architectural, Engineering, and Related Services	
Other Professional, Scientific, and Technical Services	
Management, Scientific, and Technical Consulting Services	
Data Processing, Hosting, and Related Services	
METALS AND RELATED MANUFACTURING	
Motor Vehicle Parts Manufacturing	
Metalworking Machinery Manufacturing	
Agriculture, Construction, and Mining Machinery Manufacturing	
Machine Shops; Turned Product, and Screw, Nut, and Bolt Manufacturing	
Foundries	
NONMETALLIC MINERALS & RELATED PRODUCTS	
Cement and Concrete Product Manufacturing	
Petroleum and Coal Products Manufacturing	
Lime and Gypsum Product Manufacturing	
WOOD PRODUCT & FURNITURE MANUFACTURING	
Sawmills and Wood Preservation	
Veneer, Plywood, and Engineered Wood Product Manufacturing	
Other Wood Product Manufacturing	
Household and Institutional Furniture and Kitchen Cabinet Manufacturing	

### Top 25 Skills-Based Industry Targets for Greater Fredericksburg's Displaced Workers

The table below displays the top 25 skill-based industry recruitment targets for Greater Fredericksburg, based on a comparison of the skills inherent to the region's displaced workers, and the skill requirements of individual industries.

Rank	Industry Title
1	Business Support Services
2	Drugs and Druggists' Sundries Merchant Wholesalers
3	Community Care Facilities for the Elderly
4	Electronics and Appliance Stores
5	Florists
6	Residential Mental Retardation, Mental Health and Substance Abuse Facilities
7	Wholesale Electronic Markets and Agents and Brokers
8	Building Material and Supplies Dealers
9	Home Health Care Services
10	Travel Arrangement and Reservation Services
11	Other Miscellaneous Store Retailers
12	Home Furnishings Stores
13	Electronic Shopping and Mail-Order Houses
14	Wireless Telecommunications Carriers (except Satellite)
15	Museums, Historical Sites, and Similar Institutions
16	Furniture Stores
17	Office Supplies, Stationery, and Gift Stores
18	Electrical and Electronic Goods Merchant Wholesalers
19	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers
20	Apparel, Piece Goods, and Notions Merchant Wholesalers
21	Taxi and Limousine Service
22	Paper and Paper Product Merchant Wholesalers
23	Other Transit and Ground Passenger Transportation
24	Health and Personal Care Stores
25	Special Food Services

A total of 295 industries were ranked.

Virginia's River Country Existing Industry Clusters

(ranked by 2004 employment)

AGRICULTURE, FORESTRY, AND FISHING\*  
METALS AND RELATED MANUFACTURING  
WOOD PRODUCT MANUFACTURING  
TEXTILES & APPAREL\*

Top 25 Occupations for Existing Industry Clusters	Estimated Employment, 2004q4
Farmworkers and Laborers, Crop, Nursery, and Greenhouse Team Assemblers	258
Nursing Aides, Orderlies, and Attendants	203
Farm, Ranch, and Other Agricultural Managers	141
Accountants and Auditors	106
Lawyers	104
Office Clerks, General	96
Laborers and Freight, Stock, and Material Movers, Hand	93
Woodworking Machine Setters, Operators, and Tenders, Except Sawing	92
Bookkeeping, Accounting, and Auditing Clerks	85
Welders, Cutters, Solderers, and Brazers	84
Inspectors, Testers, Sorters, Samplers, and Weighers	80
Registered Nurses	73
Industrial Truck and Tractor Operators	71
Logging Equipment Operators	71
Licensed Practical and Licensed Vocational Nurses	70
Home Health Aides	62
Assemblers and Fabricators, All Other	61
General and Operations Managers	61
First-Line Supervisors/Managers of Production and Operating Carpenters	60
Sawing Machine Setters, Operators, and Tenders, Wood	59
Maintenance and Repair Workers, General	53
Secretaries, Except Legal, Medical, and Executive	52
Truck Drivers, Heavy and Tractor-Trailer	52
Carpenters	47
First-Line Supervisors/Managers of Office and Administrative Secretaries, Except Legal, Medical, and Executive	29
General and Operations Managers	29
Veterinary Assistants and Laboratory Animal Caretakers	25
Maids and Housekeeping Cleaners	25
Nonfarm Animal Caretakers	21
Executive Secretaries and Administrative Assistants	20
Computer Systems Analysts	18
Veterinarians	17

Virginia's River Country Emerging Industry Clusters

(ranked by 2004 employment)

INFORMATION TECHNOLOGY AND PROFESSIONAL SERVICES  
HEALTH CARE  
FINANCE AND INSURANCE  
FOOD PROCESSING\*  
CHEMICALS & MATERIALS\*

**MEDICAL RELATED PRODUCTS MANUFACTURING\***

Top 25 Occupations for Emerging Industry Clusters	Estimated Employment, 2004q4
Nursing Aides, Orderlies, and Attendants	141
Lawyers	96
Accountants and Auditors	93
Office Clerks, General	73
Registered Nurses	71
Licensed Practical and Licensed Vocational Nurses	62
Home Health Aides	61
Bookkeeping, Accounting, and Auditing Clerks	52
Paralegals and Legal Assistants	47
Insurance Sales Agents	46
Legal Secretaries	37
Customer Service Representatives	35
Receptionists and Information Clerks	34
Personal and Home Care Aides	33
Management Analysts	32
Tax Preparers	31
First-Line Supervisors/Managers of Office and Administrative Secretaries, Except Legal, Medical, and Executive	29
General and Operations Managers	25
Veterinary Assistants and Laboratory Animal Caretakers	25
Maids and Housekeeping Cleaners	21
Nonfarm Animal Caretakers	20
Executive Secretaries and Administrative Assistants	18
Computer Systems Analysts	17
Veterinarians	16

## Existing Clusters, Industry List: Virginia's River Country

### AGRICULTURE, FORESTRY, AND FISHING

Greenhouse, Nursery, and Floriculture Production

Logging

Vegetable and Melon Farming

Fishing

Oilseed and Grain Farming

Fruit and Tree Nut Farming

Cattle Ranching and Farming

Other Crop Farming

Support Activities for Crop Production

Support Activities for Forestry

Support Activities for Animal Production

### METALS AND RELATED MANUFACTURING

Motor Vehicle Parts Manufacturing

Other General Purpose Machinery Manufacturing

Architectural and Structural Metals Manufacturing

Ship and Boat Building

Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing

Other Electrical Equipment and Component Manufacturing

Foundries

Other Transportation Equipment Manufacturing

### TEXTILES & APPAREL

Fabric Mills

Cut and Sew Apparel Manufacturing

Textile Furnishings Mills

### WOOD PRODUCT & FURNITURE MANUFACTURING

Sawmills and Wood Preservation

Other Wood Product Manufacturing

Veneer, Plywood, and Engineered Wood Product Manufacturing

Household and Institutional Furniture and Kitchen Cabinet Manufacturing

Office Furniture (including Fixtures) Manufacturing

## Emerging Clusters, Industry List: Virginia's River Country

### CHEMICALS & MATERIALS

Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing

Plastics Product Manufacturing

### FINANCE AND INSURANCE

Agencies, Brokerages, and Other Insurance Related Activities

Nondepositary Credit Intermediation

Other Investment Pools and Funds

### FOOD PROCESSING

Beverage Manufacturing

Sugar and Confectionery Product Manufacturing

Fruit and Vegetable Preserving and Specialty Food Manufacturing

Animal Slaughtering and Processing

### HEALTH CARE

Home Health Care Services

Residential Mental Retardation, Mental Health and Substance Abuse Facilities

Outpatient Care Centers

Other Residential Care Facilities

### INFORMATION TECHNOLOGY AND PROFESSIONAL SERVICES

Accounting, Tax Preparation, Bookkeeping, and Payroll Services

Legal Services

Other Professional, Scientific, and Technical Services

Management, Scientific, and Technical Consulting Services

Computer Systems Design and Related Services

### MEDICAL RELATED PRODUCTS MANUFACTURING

Other Miscellaneous Manufacturing

Medical Equipment and Supplies Manufacturing

74
<p>AGRICULTURE, FORESTRY, AND FISHING</p> <p>Greenhouse, Nursery, and Floriculture Production</p> <p>Logging</p> <p>Vegetable and Melon Farming</p> <p>Fishing</p> <p>Oilseed and Grain Farming</p> <p>Fruit and Tree Nut Farming</p> <p>Cattle Ranching and Farming</p> <p>Other Crop Farming</p> <p>Support Activities for Crop Production</p> <p>Support Activities for Forestry</p> <p>Support Activities for Animal Production</p> <p>METALS AND RELATED MANUFACTURING</p> <p>Motor Vehicle Parts Manufacturing</p> <p>Other General Purpose Machinery Manufacturing</p> <p>Architectural and Structural Metals Manufacturing</p> <p>Ship and Boat Building</p> <p>Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing</p> <p>Other Electrical Equipment and Component Manufacturing</p> <p>Foundries</p> <p>Other Transportation Equipment Manufacturing</p> <p>TEXTILES &amp; APPAREL</p> <p>Fabric Mills</p> <p>Cut and Sew Apparel Manufacturing</p> <p>Textile Furnishings Mills</p> <p>WOOD PRODUCT &amp; FURNITURE MANUFACTURING</p> <p>Sawmills and Wood Preservation</p> <p>Other Wood Product Manufacturing</p> <p>Veneer, Plywood, and Engineered Wood Product Manufacturing</p> <p>Household and Institutional Furniture and Kitchen Cabinet Manufacturing</p> <p>Office Furniture (including Fixtures) Manufacturing</p>

### Top 25 Skills-Based Industry Targets for Virginia's River Country's Displaced Workers

The table below displays the top 25 skill-based industry recruitment targets for Virginia's River Country, based on a comparison of the skills inherent to the region's displaced workers, and the skill requirements of individual industries.

Rank	Industry Title
1	Services to Buildings and Dwellings
2	School and Employee Bus Transportation
3	Support Activities for Crop Production
4	General Freight Trucking
5	Waste Collection
6	Specialized Freight Trucking
7	Couriers
8	Household and Institutional Furniture and Kitchen Cabinet Manufacturing
9	Animal Slaughtering and Processing
10	Logging
11	Cut and Sew Apparel Manufacturing
12	Highway, Street, and Bridge Construction
13	Support Activities for Animal Production
14	Apparel Accessories and Other Apparel Manufacturing
15	Other Specialty Trade Contractors
16	Support Activities for Road Transportation
17	Drycleaning and Laundry Services
18	Other Heavy and Civil Engineering Construction
19	Cement and Concrete Product Manufacturing
20	Remediation and Other Waste Management Services
21	Farm Product Raw Material Merchant Wholesalers
22	Waste Treatment and Disposal
23	Utility System Construction
24	Sawmills and Wood Preservation
25	Footwear Manufacturing

A total of 295 industries were ranked.

**HEALTH CARE**  
**DISTRIBUTION & WAREHOUSING**  
**CHEMICALS & MATERIALS\***  
**FINANCE AND INSURANCE**  
**MACHINERY & EQUIPMENT MANUFACTURING**  
**FOOD PROCESSING\***  
**TOBACCO MANUFACTURING\***  
**METALS AND RELATED MANUFACTURING**  
**WOOD PRODUCT MANUFACTURING**  
**TEXTILES & APPAREL\***  
**AGRICULTURE, FORESTRY, AND FISHING\***

\* These clusters have low growth potential and therefore would not be considered as “target” clusters, although individual industries may have good growth potential.

<b>Estimated Employment, 2004q4</b>	
<b>Top 25 Occupations for Emerging Industry Clusters</b>	<b>Estimated Employment, 2004q4</b>
Accountants and Auditors	344
Management Analysts	343
Lawyers	319
Office Clerks, General	299
Computer Software Engineers, Applications	223
Bookkeeping, Accounting, and Auditing Clerks	188
Computer Systems Analysts	184
General and Operations Managers	180
Computer Programmers	176
Computer Software Engineers, Systems Software	161
Secretaries, Except Legal, Medical, and Executive	158
Paralegals and Legal Assistants	157
Civil Engineers	137
Receptionists and Information Clerks	128
Electrical Engineers	127
Computer Support Specialists	127
Legal Secretaries	122
Executive Secretaries and Administrative Assistants	113
Veterinary Assistants and Laboratory Animal Caretakers	109
Tax Preparers	104
First-Line Supervisors/Managers of Office and Administrative	96
Ushers, Lobby Attendants, and Ticket Takers	94
Nonfarm Animal Caretakers	90
Customer Service Representatives	86
Network and Computer Systems Administrators	85
Inspectors, Testers, Sorters, Samplers, and Weighers	523
Secretaries, Except Legal, Medical, and Executive	520
Executive Secretaries and Administrative Assistants	406
Maids and Housekeeping Cleaners	398
Stock Clerks and Order Fillers	393
Management Analysts	377

<b>Existing Clusters, Industry List: Virginia's Gateway</b>	
AGRICULTURE, FORESTRY, AND FISHING	
Greenhouse, Nursery, and Floriculture Production	
Hog and Pig Farming	
Other Crop Farming	
Support Activities for Crop Production	
Cattle Ranching and Farming	
Support Activities for Animal Production	
Other Animal Production	
Support Activities for Forestry	
Oilseed and Grain Farming	
Fishing	
CHEMICALS & MATERIALS	
Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing	
Basic Chemical Manufacturing	
Rubber Product Manufacturing	
Cement and Concrete Product Manufacturing	
Other Chemical Product and Preparation Manufacturing	
Coating, Engraving, Heat Treating, and Allied Activities	
Paint, Coating, and Adhesive Manufacturing	
DISTRIBUTION & WAREHOUSING	
Warehousing and Storage	
General Freight Trucking	
Couriers	
Specialized Freight Trucking	
Automotive Equipment Rental and Leasing	
Freight Transportation Arrangement	
Support Activities for Road Transportation	
Other Support Activities for Transportation	
Local Messengers and Local Delivery	
Scenic and Sightseeing Transportation, Land	
Support Activities for Air Transportation	
Support Activities for Water Transportation	

<b>Existing Clusters, Industry List: Virginia's Gateway (cont.)</b>	
FINANCE AND INSURANCE	
Insurance Carriers	
Nondepository Credit Intermediation	
Agencies, Brokerages, and Other Insurance Related Activities	
Activities Related to Credit Intermediation	
Insurance and Employee Benefit Funds	
Other Investment Pools and Funds	
FOOD PROCESSING	
Animal Slaughtering and Processing	
Animal Food Manufacturing	
HEALTH CARE	
General Medical and Surgical Hospitals	
Home Health Care Services	
Community Care Facilities for the Elderly	
Nursing Care Facilities	
Psychiatric and Substance Abuse Hospitals	
Residential Mental Retardation, Mental Health and Substance Abuse Facilities	
Outpatient Care Centers	
Other Residential Care Facilities	
Other Ambulatory Health Care Services	
Medical and Diagnostic Laboratories	
Specialty (except Psychiatric and Substance Abuse) Hospitals	
MACHINERY & EQUIPMENT MANUFACTURING	
Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing	
Other Fabricated Metal Product Manufacturing	
Other General Purpose Machinery Manufacturing	
Agriculture, Construction, and Mining Machinery Manufacturing	
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	
Commercial and Service Industry Machinery Manufacturing	
Motor Vehicle Parts Manufacturing	
Electric Lighting Equipment Manufacturing	
METALS AND RELATED MANUFACTURING	
Iron and Steel Mills and Ferroalloy Manufacturing	

<b>Existing Clusters, Industry List: Virginia's Gateway (cont.)</b>		<b>Emerging Clusters, Industry List: Virginia's Gateway</b>
METALS AND RELATED MANUFACTURING (continued)		COMMUNICATION & ENTERTAINMENT
Architectural and Structural Metals Manufacturing		Radio and Television Broadcasting
Machine Shops: Turned Product, and Screw, Nut, and Bolt Manufacturing		Motion Picture and Video Industries
Forging and Stamping		Independent Artists, Writers, and Performers
Foundries		
Nonferrous Metal (except Aluminum) Production and Processing		INFORMATION TECHNOLOGY AND PROFESSIONAL SERVICES
Steel Product Manufacturing from Purchased Steel		Architectural, Engineering, and Related Services
Boiler, Tank, and Shipping Container Manufacturing		Computer Systems Design and Related Services
Metalworking Machinery Manufacturing		Legal Services
TEXTILES & APPAREL		Accounting, Tax Preparation, Bookkeeping, and Payroll Services
Fabric Mills		Management, Scientific, and Technical Consulting Services
Textile and Fabric Finishing and Fabric Coating Mills		Other Professional, Scientific, and Technical Services
Textile Furnishings Mills		Data Processing, Hosting, and Related Services
Cut and Sew Apparel Manufacturing		Scientific Research and Development Services
Other Textile Product Mills		
TOBACCO MANUFACTURING		
Tobacco Manufacturing		
Printing and Related Support Activities		
WOOD PRODUCT & FURNITURE MANUFACTURING		
Veneer, Plywood, and Engineered Wood Product Manufacturing		
Sawmills and Wood Preservation		
Other Wood Product Manufacturing		

### Top 25 Skills-Based Industry Targets for Virginia's Gateway's Displaced Workers

The table below displays the top 25 skill-based industry recruitment targets for Virginia's Gateway, based on a comparison of the skills inherent to the region's displaced workers, and the skill requirements of individual industries.

Rank	Industry Title
1	Chemical and Allied Products Merchant Wholesalers
2	Manufacturing and Reproducing Magnetic and Optical Media
3	Colleges, Universities, and Professional Schools
4	Professional and Commercial Equipment and Supplies Merchant Wholesalers
5	Apparel, Piece Goods, and Notions Merchant Wholesalers
6	Junior Colleges
7	Electrical and Electronic Goods Merchant Wholesalers
8	Miscellaneous Nondurable Goods Merchant Wholesalers
9	Business Schools and Computer and Management Training
10	Miscellaneous Durable Goods Merchant Wholesalers
11	Other Miscellaneous Manufacturing
12	Medical Equipment and Supplies Manufacturing
13	Metal and Mineral (except Petroleum) Merchant Wholesalers
14	Grocery and Related Product Wholesalers
15	Furniture and Home Furnishing Merchant Wholesalers
16	Drugs and Druggists' Sundries Merchant Wholesalers
17	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers
18	Household Appliance Manufacturing
19	Commercial and Service Industry Machinery Manufacturing
20	Electric Lighting Equipment Manufacturing
21	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers
22	Petroleum and Petroleum Products Merchant Wholesalers
23	Other Motor Vehicle Dealers
24	Paper and Paper Product Merchant Wholesalers
25	Machinery, Equipment, and Supplies Merchant Wholesalers

A total of 295 industries were ranked.

**Eastern Shore Existing Industry Clusters**  
 (ranked by 2004 employment)

**FOOD PROCESSING\***  
**AGRICULTURE, FORESTRY, AND FISHING\***  
**INFORMATION TECHNOLOGY AND PROFESSIONAL SERVICES**  
**CHEMICALS & MATERIALS\***  
**WOOD PRODUCT MANUFACTURING**  
**METALS AND RELATED MANUFACTURING**  
**COMMUNICATION & ENTERTAINMENT**

**Eastern Shore Country Emerging Industry Clusters**  
 (ranked by 2004 employment)

**HEALTH CARE**  
**FINANCE AND INSURANCE**

\* These clusters have low growth potential and therefore would not be considered as “target” clusters, although individual industries may have good growth potential.

<b>Estimated Employment, 2004q4</b>	<b>Top 25 Occupations for Existing Industry Clusters</b>	<b>Estimated Employment, 2004q4</b>
Farmworkers and Laborers, Crop, Nursery, and Greenhouse	Nursing Aides, Orderlies, and Attendants	138
Meat, Poultry, and Fish Cutters and Trimmers	Home Health Aides	72
Farm, Ranch, and Other Agricultural Managers	Registered Nurses	71
Slaughterers and Meat Packers	Licensed Practical and Licensed Vocational Nurses	65
Packaging and Filling Machine Operators and Tenders	Personal and Home Care Aides	48
Laborers and Freight, Stock, and Material Movers, Hand	Maids and Housekeeping Cleaners	19
Nursing Aides, Orderlies, and Attendants	Office Clerks, General	16
Truck Drivers, Heavy, and Tractor-Trailer	Cooks, Institution and Cafeteria	11
Food Batchmakers	Food Preparation Workers	9
First-Line Supervisors/Managers of Production and Operating	Food Servers, Nonrestaurant	9
Helpers--Production Workers	General and Operations Managers	8
Packers and Packagers, Hand	First-Line Supervisors/Managers of Office and Administrative	8
Production Workers, All Other	Physical Therapists	7
Farming, Fishing, and Forestry Workers, All Other (OES Only)	Receptionists and Information Clerks	7
Industrial Truck and Tractor Operators	Customer Service Representatives	6
Farmworkers, Farm and Ranch Animals	Recreation Workers	6
Maintenance and Repair Workers, General	Rehabilitation Counselors	6
Office Clerks, General	Tellers	6
Home Health Aides	Waiters and Waitresses	6
General and Operations Managers	Bookkeeping, Accounting, and Auditing Clerks	6
Registered Nurses	Maintenance and Repair Workers, General	6
Agricultural Equipment Operators	Medical and Public Health Social Workers	5
Licensed Practical and Licensed Vocational Nurses	Combined Food Preparation and Serving Workers, Including Fast Food	5
Inspectors, Testers, Sorters, Samplers, and Weighers	Billing and Posting Clerks and Machine Operators	5
Bookkeeping, Accounting, and Auditing Clerks	Medical and Health Services Managers	5

<b>Existing Clusters, Industry List: Eastern Shore</b>	
AGRICULTURE, FORESTRY, AND FISHING	
Vegetable and Melon Farming	
Greenhouse, Nursery, and Floriculture Production	
Support Activities for Crop Production	
Animal Aquaculture	
Other Crop Farming	
Poultry and Egg Production	
Oilseed and Grain Farming	
CHEMICALS & MATERIALS	
Cement and Concrete Product Manufacturing	
Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing	
Basic Chemical Manufacturing	
COMMUNICATION & ENTERTAINMENT	
Wired Telecommunications Carriers	
Cable and Other Program Distribution	
FOOD PROCESSING	
Animal Slaughtering and Processing	
Bakeries and Tortilla Manufacturing	
INFORMATION TECHNOLOGY AND PROFESSIONAL SERVICES	
Architectural, Engineering, and Related Services	
Computer Systems, Design and Related Services	
Scientific Research and Development Services	
METALS AND RELATED MANUFACTURING	
Foundries	
Ship and Boat Building	
Nonferrous Metal (except Aluminum) Production and Processing	
Industrial Machinery Manufacturing	
WOOD PRODUCT & FURNITURE MANUFACTURING	
Sawmills and Wood Preservation	
Veneer, Plywood, and Engineered Wood Product Manufacturing	

### Top 25 Skills-Based Industry Targets for Eastern Shore's Displaced Workers

The table below displays the top 25 skill-based industry recruitment targets for the Eastern Shore, based on a comparison of the skills inherent to the region's displaced workers, and the skill requirements of individual industries.

Rank	Industry Title
1	School and Employee Bus Transportation
2	Services to Buildings and Dwellings
3	Support Activities for Crop Production
4	General Freight Trucking
5	Waste Collection
6	Specialized Freight Trucking
7	Couriers
8	Animal Slaughtering and Processing
9	Logging
10	Highway, Street, and Bridge Construction
11	Cut and Sew Apparel Manufacturing
12	Support Activities for Animal Production
13	Apparel Accessories and Other Apparel Manufacturing
14	Drycleaning and Laundry Services
15	Other Specialty Trade Contractors
16	Support Activities for Road Transportation
17	Household and Institutional Furniture and Kitchen Cabinet Manufacturing
18	Other Heavy and Civil Engineering Construction
19	Cement and Concrete Product Manufacturing
20	Remediation and Other Waste Management Services
21	Utility System Construction
22	Waste Treatment and Disposal
23	Sawmills and Wood Preservation
24	Building Finishing Contractors
25	Foundation, Structure, and Building Exterior Contractors

A total of 295 industries were ranked.

**Hampton Roads & Peninsula Existing Industry Clusters**  
 (ranked by 2004 employment)

**INFORMATION TECHNOLOGY AND PROFESSIONAL SERVICES**  
**HEALTH CARE**  
**SHIP, BOAT and TRANSPORTATION EQUIPMENT MANUFACTURING**  
**FINANCE AND INSURANCE**  
**DISTRIBUTION & WAREHOUSING**  
**COMMUNICATION & ENTERTAINMENT**  
**AUTOMOTIVE MANUFACTURING\***  
**FOOD PROCESSING\***  
**WOOD PRODUCT MANUFACTURING**  
**METALS AND RELATED MANUFACTURING**  
**ELECTRONICS EQUIPMENT & INSTRUMENTS MANUFACTURING**  
**CHEMICALS & MATERIALS\***  
**TEXTILES & APPAREL\***  
**AGRICULTURE, FORESTRY, AND FISHING\***

\* These clusters have low growth potential and therefore would not be considered as “target” clusters, although individual industries may have good growth potential.

<b><u>Top 25 Occupations for Existing Industry Clusters (cont.)</u></b>		<b><u>Estimated Employment, 2004q4</u></b>
Computer Software Engineers	Systems Software	2,321
Computer Programmers		2,296
Computer Systems Analysts		2,293
Executive Secretaries and Administrative Assistants		2,231
Secretaries, Except Legal, Medical, and Executive		2,202
Business Operations Specialists, All Other		2,177
Insurance Sales Agents		2,049

**Hampton Roads & Peninsula Emerging Industry Clusters**  
(ranked by 2004 employment)

<b><u>Top 25 Occupations for Existing Industry Clusters</u></b>		<b><u>Estimated Employment, 2004q4</u></b>
Registered Nurses		10,113
Team Assemblers		7,880
Nursing Aides, Orderlies, and Attendants		6,321
Office Clerks, General		5,704
Welders, Cutters, Solderers, and Brazers		5,184
Customer Service Representatives		5,172
Laborers and Freight, Stock, and Material Movers, Hand		4,949
Truck Drivers, Heavy and Tractor-Trailer		4,549
General and Operations Managers		4,071
Assemblers and Fabricators, All Other		4,023
Bookkeeping, Accounting, and Auditing Clerks		3,446
Licensed Practical and Licensed Vocational Nurses		3,102
Inspectors, Testers, Sorters, Samplers, and Weighers		2,975
Industrial Truck and Tractor Operators		2,812
First-Line Supervisors/Managers of Office and Administrative		2,806
Computer Software Engineers, Applications		2,399
Tellers		2,370
Maintenance and Repair Workers, General		2,328

Existing Clusters, Industry List: Hampton Roads & Peninsula	
AGRICULTURE, FORESTRY AND FISHING	
Logging	
Other Crop Farming	
Support Activities for Animal Production	
Oilseed and Grain Farming	
Support Activities for Crop Production	
Support Activities for Forestry	
Timber Tract Operations	
AUTOMOTIVE MANUFACTURING	
Motor Vehicle Manufacturing	
Motor Vehicle Parts Manufacturing	
Motor Vehicle Body and Trailer Manufacturing	
Spring and Wire Product Manufacturing	
CHEMICALS & MATERIALS	
Basic Chemical Manufacturing	
Petroleum and Coal Products Manufacturing	
Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacture	
Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing	
Other Chemical Product and Preparation Manufacturing	
COMMUNICATION & ENTERTAINMENT	
Newspaper, Periodical, Book, and Directory Publishers	
Radio and Television Broadcasting	
Wired Telecommunications Carriers	
Cable and Other Subscription Programming	
Wireless Telecommunications Carriers (except Satellite)	
Internet Service Providers and Web Search Portals	
Software Publishers	
Cable and Other Program Distribution	
Telecommunications Resellers	
Internet Publishing and Broadcasting	
Other Information Services	
Satellite Telecommunications	
Other Telecommunications	

Existing Clusters, Industry List: Hampton Roads & Peninsula (cont.)	
DISTRIBUTION & WAREHOUSING	
Support Activities for Water Transportation	
Warehousing and Storage	
Specialized Freight Trucking	
General Freight Trucking	
Freight Transportation Arrangement	
Automotive Equipment Rental and Leasing	
Deep Sea, Coastal, and Great Lakes Water Transportation	
Support Activities for Air Transportation	
Support Activities for Road Transportation	
Scenic and Sightseeing Transportation, Water	
Other Support Activities for Transportation	
Inland Water Transportation	
Scenic and Sightseeing Transportation, Land	
Support Activities for Rail Transportation	
ELECTRONICS EQUIPMENT & INSTRUMENTS MANUFACTURING	
Computer and Peripheral Equipment Manufacturing	
Commercial and Service Industry Machinery Manufacturing	
Other Electrical Equipment and Component Manufacturing	
Semiconductor and Other Electronic Component Manufacturing	
FINANCE AND INSURANCE	
Depository Credit Intermediation	
Insurance Carriers	
Nondepository Credit Intermediation	
Agencies, Brokerages, and Other Insurance Related Activities	
Securities and Commodity Contracts Intermediation and Brokerage	
Activities Related to Credit Intermediation	
Insurance and Employee Benefit Funds	
Other Financial Investment Activities	
Other Investment Pools and Funds	
Monetary Authorities - Central Bank	
FOOD PROCESSING	
Other Food Manufacturing	
Beverage Manufacturing	
Bakeries and Tortilla Manufacturing	
Sugar and Confectionery Product Manufacturing	

Existing Clusters, Industry List: Hampton Roads & Peninsula (cont.)	
FOOD PROCESSING (continued)	SHIP, BOAT and TRANSPORTATION EQUIPMENT MANUFACTURING (continued)
Grain and Oilseed Milling	Agriculture, Construction, and Mining Machinery Manufacturing
HEALTH CARE	Engine, Turbine, and Power Transmission Equipment Manufacturing
General Medical and Surgical Hospitals	Railroad Rolling Stock Manufacturing
Nursing Care Facilities	Electrical Equipment Manufacturing
Community Care Facilities for the Elderly	Other Transportation Equipment Manufacturing
Home Health Care Services	TEXTILES & APPAREL
Psychiatric and Substance Abuse Hospitals	Fabric Mills
Other Ambulatory Health Care Services	Cut and Sew Apparel Manufacturing
Residential Mental Retardation, Mental Health and Substance Abuse Facilities	Textile Furnishings Mills
Outpatient Care Centers	Textile and Fabric Finishing and Fabric Coating Mills
Medical and Diagnostic Laboratories	WOOD PRODUCT & FURNITURE MANUFACTURING
Specialty (except Psychiatric and Substance Abuse) Hospitals	Pulp, Paper, and Paperboard Mills
Other Residential Care Facilities	Veneer, Plywood, and Engineered Wood Product Manufacturing
INFORMATION TECHNOLOGY AND PROFESSIONAL SERVICES	Household and Institutional Furniture and Kitchen Cabinet Manufacturing
Architectural, Engineering, and Related Services	Sawmills and Wood Preservation
Computer Systems Design and Related Services	Office Furniture (including Fixtures), Manufacturing
Management of Companies and Enterprises	Other Wood Product Manufacturing
Wired Telecommunications Carriers	
Data Processing, Hosting, and Related Services	
Wireless Telecommunications Carriers (except Satellite)	
Cable and Other Program Distribution	
Telecommunications Resellers	
Satellite Telecommunications	
Other Telecommunications	
METALS AND RELATED MANUFACTURING	
Foundries	Industrial Machinery Manufacturing
	Metalworking Machinery Manufacturing
	Nonferrous Metal (except Aluminum) Production and Processing
SHIP, BOAT and TRANSPORTATION EQUIPMENT MANUFACTURING	SHIP, BOAT and TRANSPORTATION EQUIPMENT MANUFACTURING
Ship and Boat Building	Other General Purpose Machinery Manufacturing
	Architectural and Structural Metals Manufacturing
	Machine Shops; Turned Product, and Screw, Nut, and Bolt Manufacturing
	Aerospace Product and Parts Manufacturing

### Top 25 Skills-Based Industry Targets for Hampton Roads & Peninsula's Displaced Workers

The table below displays the top 25 skill-based industry recruitment targets for Hampton Roads & Peninsula, based on a comparison of the skills inherent to the region's displaced workers, and the skill requirements of individual industries.

Rank	Industry Title
1	Wireless Telecommunications Carriers (except Satellite)
2	Wholesale Electronic Markets and Agents and Brokers
3	Community Care Facilities for the Elderly
4	Facilities Support Services
5	Business Support Services
6	Electrical and Electronic Goods Merchant Wholesalers
7	Telecommunications Resellers
8	Paper and Paper Product Merchant Wholesalers
9	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers
10	Newspaper, Periodical, Book, and Directory Publishers
11	Machinery, Equipment, and Supplies Merchant Wholesalers
12	Apparel, Piece Goods, and Notions Merchant Wholesalers
13	State Government (OES designation)
14	Beer, Wine, and Distilled Alcoholic Beverage Merchant Wholesalers
15	Furniture and Home Furnishing Merchant Wholesalers
16	Chemical and Allied Products Merchant Wholesalers
17	Residential Mental Retardation, Mental Health and Substance Abuse Facilities
18	Cable and Other Subscription Programming
19	Professional and Commercial Equipment and Supplies Merchant Wholesalers
20	Other Residential Care Facilities
21	Advertising and Related Services
22	Nursing Care Facilities
23	Vocational Rehabilitation Services
24	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers
25	Travel Arrangement and Reservation Services

A total of 295 industries were ranked.

**Appendix A**

Top 50 Employer Listing for Virginia  
4th Quarter (October, November, December) 2004

Rank	Company Name	NAICS Code	OC	Size Code
1	U.S. Department of Defense	928	10	09
2	Wal Mart	452	50	09
3	Fairfax County Public Schools	611	30	09
4	Newport News Shipbuilding	336	50	09
5	Food Lion	445	50	09
6	United States Postal Service	491	10	09
7	County of Fairfax	921	30	09
8	Sentara Healthcare	622	50	09
9	City of Virginia Beach Schools	611	30	09
10	University of Virginia Health Services	611	20	09
11	Inova Fairfax Hospital	622	50	09
12	Prince William County School Board	611	30	09
13	VDOT	237	20	09
14	Capital One Bank	522	50	09
15	Science Applications International	541	50	09
16	Chesterfield County School Board	611	30	09
17	Henrico County School Board	611	30	09
18	Virginia Tech Cooperative Extension	611	20	09
19	Booz, Allen and Hamilton	541	50	09
20	Lowes' Home Centers, Inc.	444	50	09
21	Norfolk City School Board	611	30	09
22	U.S. Department of Homeland Defense	926	10	09
23	7-Eleven	447	50	09
24	The Home Depot	444	50	09
25	Giant Food	445	50	09

**Appendix A**

Top 50 Employer Listing for Virginia  
4th Quarter (October, November, December) 2004

Rank	Company Name	NAICS Code	OC	Size Code
26	Loudoun County Schools	611	30	09
27	First Union National Bank	522	50	09
28	Bank of America	522	50	09
29	Target	452	50	09
30	Virginia Commonwealth University	611	20	09
31	Chesapeake City Public School Board	611	30	09
32	U.S. Department of Commerce	926	10	09
33	City of Virginia Beach	921	30	09
34	Virginia Electric & Power Company I	221	50	09
35	Philip Morris U.S.A., Inc.	312	50	09
36	United Parcel Service, Inc.	492	50	09
37	Newport News Public Schools	611	30	09
38	Riverside Regional Medical Center	622	50	09
39	May Department Stores Company	452	50	09
40	University of Virginia Medical Cent	622	20	09
41	Kroger	445	50	09
42	MCV Hospital	622	20	09
43	City of Norfolk	921	30	09
44	Computer Sciences Corporation	541	50	09
45	Lockheed Martin	541	50	09
46	United Air Lines	481	50	09
47	America Online	518	50	09
48	Verizon Virginia, Inc.	517	50	09
49	Roanoke Memorial Community Hospital	622	50	09
50	Hardee's	722	50	09

**Appendix A**

Top 50 Employer Listing for Virginia  
4th Quarter (October, November, December) 2004

Ownership Code (OC)	Ownership Type
10	Federal Government
20	State Government
30	Local Government
50	Private

Size Code	Number of Employees
09	1000 and over employees
08	500 to 999 employees
07	250 to 499 employees
06	100 to 249 employees
05	50 to 99 employees
04	20 to 49 employees
03	10 to 19 employees
02	5 to 9 employees
01	1 to 4 employees